

FIELD MUSEUM OF NATURAL HISTORY

ANTHROPOLOGY, MEMOIRS

VOLUME II, No. 1

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ARCHAEOLOGICAL EXPLORATIONS IN PERU  
PART I  
ANCIENT POTTERY FROM TRUJILLO

BY

A. L. KROEBER

PROFESSOR OF ANTHROPOLOGY IN THE UNIVERSITY OF CALIFORNIA  
RESEARCH ASSOCIATE IN AMERICAN ARCHAEOLOGY IN FIELD MUSEUM

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13 Plates, 4 Text-figures

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FIRST CAPTAIN MARSHALL FIELD ARCHAEOLOGICAL EXPEDITION TO PERU

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BERTHOLD LAUFER  
CURATOR OF ANTHROPOLOGY  
EDITOR



CHICAGO

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## CONTENTS

	Page
List of Illustrations . . . . .	5
Preface . . . . .	7
Known Pottery Styles from Trujillo . . . . .	9
Distribution of Known Styles . . . . .	11
Observations on Sites . . . . .	12
Moche . . . . .	12
Chanchan . . . . .	14
Upstream Sites . . . . .	17
Types and Styles . . . . .	18
Problems of Shape . . . . .	18
Proto-Chimu . . . . .	21
Middle Chimu . . . . .	23
Late Chimu Blackware . . . . .	23
Late Chimu Colored Ware . . . . .	28
Late Chimu from Beach Mounds . . . . .	28
Tiahuanacoid Styles . . . . .	29
Three-color Geometric Style . . . . .	31
Cursive Tripod Style . . . . .	31
Cursive Modeled Style . . . . .	32
Red-White-Black Recuoid Style . . . . .	34
The Chavin Style . . . . .	36
Chronology . . . . .	40
The Uhle Scheme . . . . .	40
The Hrdlicka Scheme . . . . .	40
Inferences and Problems . . . . .	41
Additional Notes . . . . .	43





## LIST OF ILLUSTRATIONS

### PLATES

- I. Pottery Jar of Proto-Chimu Style in Shape of a Portrait-head.  
Chimbote: Cat. No. 111378 (Zavaleta Collection).
- II. Pottery Vessels of Proto-Chimu Style.  
Viru: Figs. 1-5, Cat. Nos. 169935, 169941, 169940, 169936, 169942.  
Chimbote: Fig. 6, Cat. No. 100135 (Zavaleta Collection).
- III. Pottery Whistling Jar of Cursive Modeled Style.  
Chanchan: Cat. No. 169917.
- IV. Spout-and-Bridge Pottery Jars of Cursive Modeled Style.  
Chanchan: Cat. Nos. 169919, 169918, 169922, 169916, 169920, 169921.
- V. Pottery Jars of Red-White-Black Recuoid Style.  
Chanchan: Fig. 1, Cat. No. 169944; Fig. 3, Cat. No. 169943; Fig. 4, Cat. No. 169946. Region of Trujillo, site not determined: Fig. 2, Cat. No. 169906 (presented by Mr. Preston Locke); Fig. 5, Cat. No. 169904; Fig. 6, Cat. No. 169905.
- VI. Pottery Vessels of Late Chimu Style.  
Beach Mounds at Chanchan: Figs. 1-4, Cat. Nos. 169911, 169910, 169909, 169915. Colored Ware from Chanchan: Figs. 5-8, Cat. Nos. 169949, 169948, 169947, 169950.
- VII. Pottery Vessels of Late Chimu Style, Blackware.  
Chanchan: Cat. Nos. 169991, 169955, 169998, 169986, 170057, 169970.
- VIII. Pottery Vessels of Late Chimu Style, Blackware.  
Chanchan: Fig. 1, Cat. No. 169952; Figs. 3-6, Cat. Nos. 169962, 169981, 169968, 170008.  
"Chimu": Fig. 2, Cat. No. 111374 (Günther Collection).
- IX. Pottery Vessels of Late Chimu Style, Blackware.  
Chanchan: Cat. Nos. 169977, 169994, 170049, 169969, 170050, 170305, 170032.
- X. Pottery Vessels of Late Chimu Style, Blackware, and Figurines.  
Chanchan: Cat. Nos. 170042, 170043, 170075, 170076, 170074.
- XI. Cursive Style Painted Designs on Pottery Vessels.  
Chanchan: 1, 1a, 1b, Cat. No. 169918 (Pl. IV, Fig. 2); 2, 2a, Cat. No. 169917 (Pl. III); 3, 3a, 3b, Cat. No. 169922 (Pl. IV, Fig. 3).  
Region of Trujillo: 4, Cat. No. 169904 (Pl. V, No. 5) Huamachuco, interior of northern Peru: 5, University of California 4-3563b (Uhle Collection).
- XII. Pottery Designs, Style of Chavin.  
Chicama Valley. Specimens in Museo de Arqueología Peruana (for-



merly collection of V. Larco Herrera), reproduced from Tello, *Introducción a la Historia Antigua del Perú*, 1921: 1, Pl. VIII; 2, Pl. X; 3, Pl. XI; 4, Pl. XII.

### XIII. Various Vessels and Designs.

Jar of three-color Geometric Style. Chimbote: 1, Cat. No. 4935 (G. A. Dorsey, Collector).

Late Chimu Colored Vessels and Blackware Moulded Design from Chanchan: 2, Cat. No. 169913; 3, Cat. No. 169912; 4, Cat. No. 169909 (Pl. VI, Fig. 3).

Late Chimu Painted Designs from Chanchan: 5, Cat. No. 169949 (Pl. VI, Fig. 5); 6, Cat. No. 169947 (Pl. VI, Fig. 7).

### TEXT-FIGURES

	Page
1. Late Chimu Blackware Plate Bowl from Chanchan. Cat. No. 169888 .	24
2. Shapes occurring in Late Chimu and Other Styles . . . . .	25
SM, Stirrup-mouth; DS, Double-spout; FS, Figure and Spout; HS, Head and Spout; DJ, Double Jar; HJ, Handled Jar; J, Jar without Handle.	
Cat. Nos. 170018, 170017, 170016, 170310, 170071, 170020, 170031, 169995.	
3. Chavin Style Incised and Painted Design on a Stirrup-mouth from Moche. <i>a</i> Front View, <i>b</i> Side View. University of California, Cat. No. 4-2980 . . . . .	38
4. Chavin Style Incised and Painted Design on a Fragment from Moche. University of California, Cat. No. 4-2896 . . . . .	39



## PREFACE

During the first half of 1925 I was commissioned by Field Museum of Natural History to conduct archaeological explorations in Peru. This work was done under authorization and supervision of the government of Peru, which retained such of the objects secured as seemed necessary from the point of view of national interest. Appreciation is herewith expressed, for permits and courtesies received and for the desire manifested to encourage the progress of scientific knowledge, to his Excellency President Leguia; to Sr. A. Maguina, Minister of Justice and Education; to Dr. Alberto A. Giesecke, Director of Instruction; and to Dr. J. C. Tello, Director of the new national Museum of Peruvian Archaeology.

Most of the explorations made were carried on in the coast areas of central and southern Peru. Delays incident to the classification and description of a collection, and the editing of notes, have deferred the completion of the proposed full report on the results of this work. This present preliminary monograph deals only with the pottery art of the northern coast region in the vicinity of Trujillo, which was more briefly visited.

Trujillo is the second oldest Spanish city in the land, the largest in northern Peru, and more or less in a class with Cuzco, Arequipa, and Callao in being in the primary population rank after Lima. It also has in its immediate vicinity the prehistoric remains of Chanchan and Moche, the former perhaps the largest ruined city of Peru, the latter containing probably the highest pyramid at least in the northern part of the country. The valley, however, seems not to be notably larger than others in north Peru. It is exceeded in size, in exports, and in agricultural productivity by the valley of Chicama adjoining it on the north; and it does not seem markedly richer than Chicama in prehistoric specimens. It is likely that many of the specimens labelled "Trujillo" in museums are actually from Chicama, the name of the metropolis of the region having become attached to them instead of that of a farming district little known abroad. On the other hand, Chicama, in spite of its richness in specimens, and in small or moderate-sized ruins, seems to contain no sites of the extent or impressiveness of Moche and Chanchan.





# ARCHAEOLOGICAL EXPLORATIONS IN PERU

## PART I

### ANCIENT POTTERY FROM TRUJILLO

#### KNOWN POTTERY STYLES FROM TRUJILLO

Trujillo is one of the centres yielding the Chimu or Trujillo or Northern Coast type of pre-Hispanic pottery, which was for a long time, with the possible exception of Inca products, the ancient native ware best known and most abundantly represented in collections outside of Peru. It is the style characterized by the finest and most effective modeling, by a luxuriance of vessel forms bearing a narrow mouth or a hollow stirrup-shaped handle, by the frequency of bucchero or smoked blackware, and by a sparing use of color in all cases. There are two well-known varieties of this Chimu pottery, one red and white (with a small admixture of smoked pieces), the other usually black (but sometimes colored). The distinction between these two varieties is generally recognized in Trujillo to-day, and must have been known long ago, since each of the two great ruins of the valley yields vessels overwhelmingly of one type.

So far as science is concerned, a classification of Trujillo ware was first made by MAX UHLE, who having excavated at Moche for the University of California in 1899, announced his results at the Thirteenth International Congress of Americanists at New York in 1902,<sup>1</sup> and later published a compact, important paper.<sup>2</sup> Uhle showed conclusively that the red-white style is earlier than the one in which blackware is in the majority. He named the two styles respectively Proto-Chimu and Chimu. As the latter contains Inca admixture at times, the designation Late Chimu seems warranted and more likely to avoid confusion. Tello uses "Tallan" for the blackware variety, whose centre seems to have been in the habitat of the Tallanes north of Trujillo. He reserves the term "Chimu" for the red and white style ware.<sup>3</sup>

Uhle did not limit himself to Proto-Chimu and (Late) Chimu, but briefly described scantier remains of several other styles which he intercalated between these two dominant ones.<sup>4</sup> These others are a Tiahuanaco-like ware; a post-Tiahuanaco or Epigonal ware; a non-Tiahuanaco ware as to whose temporal distinctness from the post-Tiahuanacos material he does not seem to be quite

<sup>1</sup> Types of Culture in Peru, *American Anthropologist*, n.s. Vol. IV, 1902, pp. 753-759.

<sup>2</sup> Die Ruinen von Moche, *Journal de la Société des Américanistes de Paris*, n.s. Vol. X, 1913, pp. 95-117. Cited hereafter as "Uhle, Ruinen."

<sup>3</sup> Introducción a la Historia Antigua del Peru (Lima, 1921). His chronological diagram in this work postulates a "Pre-Tallanes" and a "Pre-Chimu" culture, which are not described in the text. The red and white style (his Chimu, Uhle's Proto-Chimu), centering at Chanchan, is placed in the upper half of his Second or Pre-Inca period (ca. A.D. 800-1150). It would therefore not commence until about A.D. 1000, and is represented as influenced by the First Period Andean style of Chavin (previous to A.D. 800). The blackware or Tallanes style is placed at the end of the Second Period. Both continue into the Third or Inca period (A.D. 1150-1530). Also see p. 43.

<sup>4</sup> UHLE, Ruinen.

clear; and a Red-white-black Geometric ware similar to a well-known style of the central Peruvian coast. The latter is established as earlier than Late Chimu by a stratification encountered by Uhle. As to the place in time of the three other non-Chimu styles, his evidence is complex and indirect. Working over his collections and data, I was led to doubt whether these three "mediaeval" styles could be separated from one another in time.<sup>1</sup> On the other hand, it does appear that the available indications make them earlier than Late Chimu and later than Proto-Chimu. Thereby the priority of Proto-Chimu civilization to that of Tiahuanaco seems established. Or at least, to move conservatively with SELER,<sup>2</sup> the priority of Proto-Chimu to the arrival of Tiahuanaco influence in the Chimu area seems certain.

These intermediate styles, whether they represent as many periods or only one period of mixed foreign influences, however interrupt the development from Proto to Late Chimu, which two styles are manifestly more similar to each other than either is to the intrusive styles. It is conceivable that the Proto-Chimu style died out under foreign influence or conquest, and was then subsequently revived in the somewhat altered Late Chimu manner. But the hypothesis of such a renaissance seems weak: Late Chimu is too close to Proto-Chimu in most fundamentals to make a complete interruption probable, and appears too vigorous in its motivations for a resurrected art. The more likely as well as simpler explanation would be that the old Proto-Chimu art carried on, if not at Trujillo, then elsewhere on the northern coast, during the era of foreign influences, and reappeared as Late Chimu at the end of a continuous development on Chimu soil. This theory postulates a "Middle Chimu" style; and to test the theory, I have stylistically analyzed available Chimu pottery with a view to isolating an ingredient that might fairly be described as intermediate in character between Proto and Late Chimu; but without arriving at more than tentative conclusions.<sup>3</sup>

There exist published indications of still other styles in the Chimu area. One of these is represented by three-legged open bowls included by Dr. Uhle in his "non-Tiahuanaco" material, and apparently recognized as distinctive by W. LEHMANN.<sup>4</sup> Not only does the form of these vessels suggest affinities with more northerly areas, but their decoration is in many cases more cursive than customary in Peruvian ceramics. They connect, however, with other three-legged examples painted in more or less Epigonal manner<sup>5</sup> and, according to a personal communication made by Sr. Jijón y Caamaño, with the Tuncahuan style of Ecuador.

Equally distinctive, and esthetically of genuine impressiveness, are a small number of vessels (Plate XII), nearly all in the Museo de Arqueología Peruana (formerly Larco Herrera) in Lima, several of which have been illustrated and

<sup>1</sup> KROEBER, The Uhle Pottery Collections from Moche, Univ. Calif. Publ. Am. Arch. and Ethn., Vol. XXI, 1925, pp. 191-234. Cited as "Kroeber, Moche."

<sup>2</sup> *Gesammelte Abhandlungen*, Vol. V, 1915, p. 130.

<sup>3</sup> KROEBER, Moche, pp. 221-224.

<sup>4</sup> The Art of Old Peru (London, 1924), p. 40, note 68. KROEBER, Moche, pp. 212-213.

<sup>5</sup> HRDLICKA, Smithsonian Misc. Coll., Vol. LVI, No. 16, 1911, Plate 1; KROEBER, Moche, Plate 69a,b.



interpreted by TELLO.<sup>1</sup> He designates them as examples of the type of Chavin, on account of their decoration being manifestly related to a remarkable style of carving found in stone monuments at Chavin, in the north Peruvian interior. On the other hand, the attributed provenience of the pottery pieces is the coast valley of Chicama, the one next north of that of Trujillo; and the vessel shapes are coastal: stirrup-mouths, generally.

Still other styles, or stylistic influences, will be discussed below. Those mentioned may be recapitulated thus:—

Proto-Chimu, red and white modeled, free from specific Tiahuanaco influences.  
Late Chimu, black modeled; usually with some admixture of Inca aryballuses.  
Middle Chimu, hypothetical.  
Tiahuanaco, Tiahuanaco derived (Epigonal), and Tiahuanaco influenced.  
Red-white-black Geometric, stratigraphically below Late Chimu.  
Cursive, on tripod bowls.  
Chavin.

### DISTRIBUTION OF KNOWN STYLES

As to the distribution of these various styles within the northern coast region, only two facts seem as yet established. The first is that nothing in true Tiahuanaco manner, or in the true Red-white-black Geometric style, has yet been found north of Trujillo; although in the face of the incompleteness of all Peruvian archaeological data, any such negative record must be provisional.

Better founded, because based on some thousands of specimens whose source is known at least as to district, is the unequal distribution of Proto-Chimu and Late Chimu. The latter is by far the more widely spread. It occurs pure, with only minor regional variation, from Piura to Casma; and can be followed as far as Ica and Nazca. Proto-Chimu, on the other hand, belongs to the valleys of Chicama, Trujillo, Viru, Chao, and the Lower Santa (Chimbote). In these its remains are about equally numerous with late Chimu ones. The next valleys to the north and south, respectively those of Pacasmayo (Chepen) and Casma, still contain some Proto-Chimu pottery, but as a minor constituent of their antiquities; and beyond, it has not been reported. By valleys, the distribution of Proto-Chimu and Late Chimu is:<sup>2</sup>—

Chira (Amotape)	. . . . .	L Ch?
Piura	. . . . .	L Ch
Lambayeque (Chiclayo)	. . . . .	L Ch
Eten	. . . . .	L Ch
Sana	. . . . .	L Ch
Pacasmayo (Chepen)	. . . . .	(Pr Ch) L Ch
Chicama	. . . . .	Pr Ch L Ch
Trujillo (Catalina)	. . . . .	Pr Ch L Ch
Viru	. . . . .	Pr Ch L Ch
Chao	. . . . .	Pr Ch L Ch
Santa (Chimbote)	. . . . .	Pr Ch L Ch
Casma	. . . . .	(Pr Ch) L Ch
Huarmey	. . . . .	(L Ch)
To south beyond <sup>3</sup>	. . . . .	(L Ch)

<sup>1</sup> Introducción, *op. cit.*, Plates 8-12.

<sup>2</sup> KROEBER, Moche, pp. 224-229.

<sup>3</sup> KROEBER, Univ. Calif. Publ. Am. Arch. and Ethn., Vol. XXI, 1925, pp. 239-240.

## OBSERVATIONS ON SITES

The summer preceding my visit was the rainiest remembered in Trujillo. The figures given me were of a rainfall of 290 mm during three days of March, 1925, and over 300 mm for the season, as against an aggregate of 28 mm for the eight preceding years 1917-1924. That is, a foot fell in 1925 as against an average of about an eighth of an inch previously. Practically every structure in Trujillo was damaged, and wide-spread suffering resulted. The ruins did not escape unscathed. At Chanchan one of two adobe relief mosaics,<sup>1</sup> which I had seen in good condition of preservation in January, while my steamer lay for some hours in Salaverry, was destroyed down to the barest traces; the other remained in fair state, but was apparently considerably injured. At Moche, damage was done to the mass of the great Sun pyramid, for which the improved view now afforded of its interior structure is only slight compensation.

### MOCHE

The ruins of Moche, nearly equally distant from Moche and Trujillo, are customarily approached from the smaller town, but in the dry season when the river has shrunk, can no doubt be conveniently reached from Trujillo in a few minutes by automobile. They rise impressively, somewhat like the pyramids of Teotihuacan, though less high and less bold. They lie between the conical peak called Cerro Blanco and the Moche river—the stream of the valley of Trujillo—on the southern edge of that valley, a few kilometers from the sea. There are no city walls and no significant small mounds or outworks, the ruins being substantially confined to the Huacas (“temples” or “pyramids”) of the Sun and the Moon. Both names are probably unauthentic. The Huaca de la Luna is a terraced platform built on the lowest slope of the Cerro Blanco. Across a dry plain, with its back against the river, the much larger Huaca del Sol rises free. The principal cemetery is behind the Moon platform, in the sandy slopes of the Cerro, and follows the hill around to both sides for some distance. As at most sites of major importance, huaqueros were digging loot in the cemetery the day of my visit.

Moche is distinctly a Proto-Chimu ruin, both in popular local opinion which characterizes its pottery as “colorado,” and superficially to the eye. Practically all sherds are red. The great majority of these are coarse and unornamented, from utilitarian vessels; but fragments that show modeling or are neatly painted in red and white can be picked up without difficulty. Not only the cemetery beside and behind the Moon pyramid looks red from a distance from the abundance of sherds, as MIDDENDORF<sup>2</sup> says; the same is true of the local plain between the two pyramids.

My estimate from surface conditions as compared with those at Chanchan would have been that Moche was essentially a Proto-Chimu site, and its Late Chimu occupation sparse or brief.

<sup>1</sup> These have been repeatedly illustrated; for instance, in MIDDENDORF, *Peru*, Vol. II, p. 376.

<sup>2</sup> *Peru*, Vol. II, p. 397.



The Sun pyramid formerly had a *monte*, a strip of trees and brush, between it and the river. This vegetation shows in several of Uhle's photographs taken in 1899. Through this vegetation ran an acequia. This ditch received a large part of the flood flow of the river in March, 1925, the brush was torn out, and has been replaced by a bare waste, and the river scraped against most the western length of the oblong pyramid, causing quantities of adobes to fall. At the projecting southwestern corner the adobes obstructed the flow, and in May were still damming a considerable pond that washed the foot of a great part of the pyramid.

The undercutting and falling, which obviously have also occurred on previous occasions,<sup>1</sup> reveal the internal mass of the pyramid as built solidly of the large, well-squared adobes that are visible on the surface and in excavations on both pyramids. There is none of the retaining wall and fill, or chamber and fill structure, that is so characteristic of the equally large elongated pyramids of Aramburú in Lima valley. What is more, apparently the whole height of the Sun pyramid, and at least most of its length, were carried up at one time, as a single undertaking. This is again in contrast with Aramburú, where the indications are of a gradual accretion both horizontally and vertically. The Sun pyramid structure is uniform and uninterrupted. Near the northern, lower end, the cut face above the talus shows pilasters a few adobes wide and from 5 to 8 m high, each apparently raised by itself, since the joints do not break between one column and the next. Probably each apparent column is the end of a wall that runs across the breadth of the pyramid, and the edifice was raised, at least in this portion, by building up walls side against side. This might conceivably have been done at intervals; but the walls or columns are so alike as to suggest that their separateness is only an incident of the method of construction, and that they were reared more or less simultaneously (see, further, p. 43).

It is clear that in spite of the masonry of the Sun pyramid being unusually good—and that of the Moon is identical—it agrees with all other Peruvian brick and stone construction in not insisting vigorously on the breaking of joints as a fundamental principle. Some compensation is found in the fact that courses of adobes are not infrequently laid in different directions, cross instead of lengthwise, or even on edge. These variations seem to have been decoratively rather than structurally motivated, since they are observable mostly in exterior work. They were also noted at Chanchan.

The Huaca del Sol as a whole (i.e. its substructure or lower pyramid) is oblong and five-terraced. Its southern half is surmounted by a square seven-step pyramid somewhat higher in itself than is the substructure. At the southern foot of this upper pyramid there is a ledge or platform of the substructure or lower pyramid.<sup>2</sup> This is "site A," which was used as a cemetery, and in which Uhle obtained his Tiahuanaco, "post-Tiahuanaco," and "non-Tiahuanaco"

<sup>1</sup> MIDDENDORF (Peru, Vol. II, p. 396) tells of attempts made in 1602 to find treasure in the huaca by hydraulic excavation.

<sup>2</sup> KROEBER, Moche, map Plate 50, site A corresponds to UHLE, Ruinen, map Fig. 1, site D; also to area C (not A) in the larger scale map in UHLE, Fig. 3 and KROEBER, Fig. 4. The designation "site A" is retained because it is the one originally applied and used in the cataloguing of the collections made at Moche by Uhle for the University of California.

specimens. The precise conditions surrounding these three lots of material were however sufficiently complicated and obscure<sup>1</sup> to make a re-examination of the site A platform desirable. My hopes in this direction were destroyed by the rains of the year, which completely wrecked any traces of structure that previous excavations might have left. Where Uhle speaks of a cemetery filled with grave soil 0.8 m deep, in which were constructed tombs,<sup>2</sup> there are now gashes and gullies several metres deep, smeared over with dissolved adobe, and with but few scattered sherds showing. Even the most painstaking excavation would probably reveal nothing certain.

On the other hand, there is a similar, slightly smaller platform at the north foot of the upper pyramid.<sup>3</sup> This has been somewhat less torn up by excavators and water than the southern platform. The holes in its surface suggested rifled tombs originally sunk into the adobe mass of the pyramid, rather than tomb chambers of adobes erected in "grave-soil," as Dr. Uhle describes the few intact interments he succeeded in finding in the opposite A terrace. But excavation would be needed to establish this point, if, indeed, anything can still be determined in regard to a spot so considerably ruined. The wash of the recent rains afforded at least one advantage: an exceptional number of sherds had been exposed by them. The usual overwhelming majority of plain pieces resembled the fragments to be found elsewhere in the Moche ruins in texture and general red color. Of the painted or modeled sherds on this north platform, some were pure red and white Proto-Chimu; others consisted of low ring pedestals of shallow bowls, or of parts of the sides of such bowls pressed in relief. Parts of several such bowls were gathered (No. 169901). This is a significant occurrence because no sherds of such bowls were seen elsewhere in the ruins; and particularly because Uhle collected twenty such bowls, wholly or partly preserved, in his excavations of the south platform.<sup>4</sup> They constitute in fact the largest group of vessels found by him on the platform, and are more numerous than either the "Tiahuanaco" or the "Epigonal" vessels. My fragments are therefore a corroboration of his results at site A, especially in view of his having excavated carefully for days or weeks, whereas I only gathered from the surface for an hour, twenty-five years later. In short, there can remain no doubt that both platforms flanking the upper pyramid of the Huaca del Sol were used as cemeteries of a non-Chimu and post-Proto-Chimu culture which has not yet been found elsewhere at Moche, but which has definite affiliations to the south, as at Supe.<sup>5</sup>

### CHANCHAN

The dead city of Chanchan is probably the largest ruin in Peru, even surpassing Pachacamac in extent. It is a maze of walls, with large empty courts and spacious rooms or houses. It contains three or four good-sized huacas, but

<sup>1</sup> KROEBER, *Moche*, pp. 207-212.

<sup>2</sup> UHLE, *Ruinen*, Fig. 14.

<sup>3</sup> Area B of UHLE, Fig. 3, and KROEBER, Fig. 4.

<sup>4</sup> KROEBER, *Moche*, 210, Plates 65g, h, i, 66h.

<sup>5</sup> KROEBER, *The Uhle Pottery Collections from Supe*, Univ. Calif. Publ. Am. Arch. and Ethn., Vol. XXI, 1925, pp. 235-264; especially Plates 73k-o, 75g-k, 78d, f, k, n; also p. 246, No. 19.



the smaller pyramidal structures sometimes interpreted as chiefs' houses are relatively less numerous than at Pachacamac. The large huacas have been much spoiled by gold hunters. Their names were given me with uncertainty; but one, which is perhaps the huaca in which the legendary peje chico of treasure-seeking was found in the sixteenth century, has been exposed to its very bowels. Its material is adobes, smaller than those at Moche, but fair-sized. The innumerable walls of the town seem at first glance to be of *tapia*, continuous clay construction; but breaches and slips reveal that considerable parts of them are of adobes similar to those of the huacas, the aggregate being coated with clay. As at Moche, successive courses of bricks are sometimes laid with different faces up. On the whole, the walls have stood up well, not infrequently retaining a height of 5 or 6 m, and give an impression of relative recency.

Chanchan is bewilderingly intricate in spite of the roominess of many of its enclosures, and the sketch plans long ago published<sup>1</sup> cannot but be inadequate. Bandelier, who worked here some thirty years ago, made a large scale plan of the ruins which, it is to be hoped, may be made use of by publication before suffering the accident which is the fate of so many manuscripts.

The fact of the adobes of Chanchan being smaller than the earlier ones of Moche brings up an instance of a caution; namely, against the hasty identification of a culture with a style of building material, such as large adobes with the Incas, *tapia* with the immediate pre-Inca civilization of the coast, adobe lumps or Cyclopean masonry with primitive periods. Not that general construction trends characteristic of civilizational periods are lacking in Peru; but there seems to exist a greater variability within cultures than most writers convey. What is needed is, first, more exact data on the building materials of a greater number of specific sites whose pottery or other artifacts are known; and then a matter-of-fact synthetic interpretation of the data. It is rather evident that wherever Nazca influence is discernible on the coast, round adobes are frequent, and that definitely Inca structures tend to contain large well-squared ones. But the present example serves to show that the larger bricks of good quality may also be the earlier ones; and many cases prove that the prevailing building habit of a period or culture was often locally or temporarily modified, perhaps by availability of material, example of neighbors, or obscurer causes.

Chanchan itself is remarkably poor in pottery fragments, and nearly all that appear are plain red—fragments of utilitarian vessels that got broken now and then. There are also few evidences of burials within the walls. I found one small cemetery, whose style and remains tallied exactly with those outside the city.

The large cemeteries lie between the city and the beach, stretching perhaps 2 or 3 km, possibly more, as I did not examine the area northwest of the town. Immense quantities of material have been extracted by huaco hunters without exhausting the supply. I saw unlicensed diggers at work, and was told that until the March floods from ten to fifteen could sometimes be found operating on one day. The cemeteries are on a sort of terrace which is nearly of the level of the

<sup>1</sup> For instance by MIDDENDORF, Peru, Vol. II, pp. 373, 374.

city, and separated from the ocean not only by the beach, but by a belt of low land, partly marsh. Into this swampy tract the cemetery terrace runs out in several tongues; between two of which rushes were being cut and bundled for a balsa at the time of my visit. At first the cemetery terrace seems natural,—the edge of the peneplain on which the city stands. But inspection shows several of the tongues to have a definitely rectangular outline, such as could scarcely be produced by natural agencies alone. Toward the south, the contours look less artificial, and there are stratifications that seem due to geological rather than human forces. The material is loamy or sandy soil and worn rock from the hills, not beach stones.

The pottery on the surface is both red and black. The contrast to the all red surface fragments of Moche is striking. Further, none of the redware is ornamented, but much of the blackware is. This means that the fine and most characteristic pottery of Chanchan is black, the red fragments being from household vessels. I was told that at the north end of the cemeteries graves contain only blackware, while at the south end both red and black vessels of quality occur; but I cannot confirm this statement.

Toward the south, several low, yellowish mounds rise from the marsh, which I did not have opportunity to visit. They are said to be huacas that contain graves, but are not often dug into, because their loose sand makes deep excavation difficult under the unsystematic burrowing methods followed by the huaqueros. I secured seven vessels attributed to these small huacas in the marsh. These specimens are described below: they are mostly Late Chimu of regular type.

It is evident that there are vessel forms in which collectors are not interested and which huaqueros therefore do not trouble to bring in. Such, for instance, are rather large black plates with steepish sides (Fig. 1 on p. 24). These are often of good quality and well polished. They lie about recently opened graves; but, precisely because they can be had for nothing, seem rarely to have found their way into museums or scientific records.

The excavation debris on the cemeteries is surprisingly similar to that of the majority of sites between Lima and Nazca—the more recent pre-Hispanic ones. There are the same undeformed or occipitally flattened skulls, often stained green about the teeth from a bit of copper laid in the mouth. The frequency, or degree, of flattening is possibly a little greater at Chanchan than farther south. Bodies are flexed, but seem to vary between seated and lying position. They are mostly fragile and, since the huaqueros treat them merely as signposts to the vessels or metal that may surround them, it is often impossible to tell the position of a body even in a recently opened or partly opened burial. Textiles are also badly preserved; in general, the average quality seems rather poor, the types similar to those from Lima south. Spindles, weaving implements, and wooden agricultural tools also resemble those on the central coast. It is clear that in the last century or so before Pizarro the culture of the whole coast of Peru was comparatively uniform.

A name seems needed for this wide-spread form of civilization of which Late Chimu, Late Ancon, Sub-Chancay, Late Chincha, Late Ica, etc. are, in the main,



only local varieties. I would suggest "Late Coast," or possibly "Late Peruvian" if many elements of the culture should prove to extend to the interior. Dr. Uhle in his "Pachacamac" seems to imply the same meaning by his General or Common Culture of the Coast; but these phrases are cumbersome. Dr. Tello says simply "Inca," with reference to the fact that specific Inca forms are on the coast associated with this type of culture, even though the most characteristic and prevalent elements of the culture are not of specific Cuzco type.

#### UPSTREAM SITES

Moche and Chanchan dominate, but do not exhaust the archæology of Trujillo valley.

Upstream, on the south side of the river, is a group of fair-sized mounds near Santo Domingo.

Farther up, about Quirihuac, are three sites. Just upstream from the settlement, on a "pampita" at the foot of the cerros, is a cemetery, without surface indications, of shallow and deep graves in rocky soil. The sides and covers of the graves are of stone. The sherds are pure Proto-Chimu red and white.

On the opposite, south side of the river are the other two sites. One of these, downstream about 2 km, is a terraced mound with tombs. The other, Jesús María, is upstream about the same distance on a sandy pampa or quebrada delta. Both are said to yield the same red and white pottery as Quirihuac and Moche.

## TYPES AND STYLES

While no excavations were made at Trujillo, several collections were seen, and one formed with unusual intelligence by Sr. Fernando Jacobs was purchased for the Museum. Of this, a selection was retained by the Museo de Arqueología Peruana. The remainder, with a few odd pieces bought, the observations made, and the data available in literature, render certain interpretations possible.

## PROBLEMS OF SHAPE

It will first be desirable to define several vessel shapes which will be referred to frequently. These shapes, with the names and symbols adopted for them, are shown in Fig. 2 (p. 25).

The stirrup-mouth, SM, is the pottery form most characteristic of Trujillo and the northern coast area. It is abundant both in Proto and Late Chimú. It does not appear elsewhere in Peru except in associations which either show other Chimú traits or are definitely late. Most frequently at a distance from the Chimú area, the stirrup-mouth appears associated with aryballus or other specific Inca forms. This shape then is clearly a Proto-Chimú invention, so far as Peru is concerned.

The double-spout, DS, is fairly common in Late Chimú, but wholly lacking from Proto-Chimú. Its earliest occurrence in Peru seems to be in the Nazca region. It is characteristic of both the principal Nazca (Proto-Nazca) styles, which GAYTON and KROEBER<sup>1</sup> have designated A and B and Dr. Tello Nazca and Pre-Nazca, and which, being free of Tiahuanaco influences, are almost certainly pre-Tiahuanaco in age. The double spout is therefore clearly old on the southern coast, and was probably invented there. In its Nazca form the spouts are short, cylindrical, and parallel; that is, vertical. Outside of the Nazca style the spouts are always long, tapering, and spreading. Quite frequently also the non-Nazca double-spout vessels bear Tiahuanaco-influenced designs, as at Pachacamac, Ancon, and Supe.<sup>2</sup> In Late Chimú these Tiahuanacoid designs are lacking, but the form of the vessel is that which it has in central Peru. Definitely late ware south of the Chimú area has few double-spouts: this shape evidently went practically out of use in the region of its presumable origin, while it was still flourishing in the region which it reached latest.

The head-and-spout, HS, looks like a modification of the double-spout, a modeled head replacing one of the spouts. It is not found in Nazca style A, but occurs in Nazca B (Tello's Pre-Nazca). On the central coast it appears in association with the Tiahuanaco-influenced double-spouts.<sup>3</sup> In the north, the head-

<sup>1</sup> Univ. Calif. Publ. Am. Arch. and Ethn. (in press).

<sup>2</sup> For instance, KROEBER, Supe, work cited, Plate 74.—The Proto-Lima ware of Nievería and especially the Chancay El style ware include double-spouts that are nearer in shape to the Nazca ones than those in other central coast styles (KROEBER, Chancay, Univ. Calif. Publ. Am. Arch. and Ethn., Vol. XXI, Plates 88, 89); but there is other definite Nazca influence in these two styles.

<sup>3</sup> As at Supe: KROEBER, Plate 74.



and-spout is lacking from Proto-Chimu, but is fairly frequent in late Chimu.<sup>1</sup> This again looks like a gradual spread from south to north, and supports the interpretation of the shape as having arisen out of the double-spout. On the basis of mere form, the head-and-spout could theoretically be just as well derived from the stirrup-mouth, since the stirrup often occurs attached to a modeled human or animal figure (Plate II, Figs. 1, 3, 5). But such an interpretation would leave the south and central Peruvian distributions and sequences unexplained.

The figure-and-spout, FS, is even more obviously related to the double-spout. Its distribution and history are similar to those of the head-and-spout, except that it is rarer in south and middle Peru, and seems to have had its main vogue in the late Chimu style. The double jar, whose discussion follows, may have had an influence in the development of the figure-and-spout vessel.

The double jar, DJ, has a reverse history from the preceding shapes. It does not occur in pure Nazca style ware, but is found in Proto-Chimu.<sup>2</sup> It is relatively more abundant in Late Chimu.<sup>3</sup> Farther south, it is not common except in association with Chimu or Inca influences. For this shape, then, the indicated spread was from north to south. It has evidently affected the head-and-spout and figure-and-spout shapes, perhaps largely causing their development out of the double-spout. This conclusion is confirmed by the fact that the Chimu double jars, both Proto and Late, whistle when they are blown into or when water is tilted from the rear into the front chamber. The Late Chimu figure-and-spouts and head-and-spouts also whistle; whereas those from farther south usually do not, except when they are late and Chimu-influenced.

The handled and handleless jars, HJ and J of Fig. 2 (p. 25), require no comment other than the observation that the handled form does not occur in Proto-Chimu whereas the handleless is exceedingly common.<sup>4</sup> The only handled shape in Proto Chimu has a long, even, vertical spout with a round quarter-circle handle,<sup>5</sup> and is without figure modeling. This shape is evidently related to the stirrup-mouth. On the contrary, Late Chimu jar-handles are typically flat instead of cylindrical, in which they agree with Late Chimu double-spouts, double jars, and figure and head-and-spouts, whose "bridges" are ribbon-like. Proto-Chimu bridges on double jars have half-rounded handles. There is thus a definite pattern set that holds consistently for Proto-Chimu and another that holds largely for Late Chimu. The characteristic Proto-Chimu form that has a handle or equivalent is the stirrup-mouth; the long-spouted jar and double jar have their cylindrical or roundish handles determined by the stirrup-mouth. Late Chimu retains the stirrup-mouth, but has nearly lost the long-spouted jar,<sup>6</sup> has made its double jar-bridges flat to conform with the flat bridge of the introduced double-spout and its derivations, and has added a flat handle to many of its ordinary jars.

In summary, the earliest known pottery of the northern coast (Proto-Chimu) is characterized by double jars and especially by stirrup-mouths and by absence

<sup>1</sup> KROEBER, *MOCHE*, Plate 60a, Late Chimu, vs. no examples in a larger Proto-Chimu collection, Plates 53-59.

<sup>2</sup> KROEBER, *Moche*, Plate 56k, l.

<sup>3</sup> *Ibid.*, Plates 60c, i, 61b, 62e; see also Plate IX of this publication.

<sup>4</sup> KROEBER, *Moche*, p. 201, shapes 6 and 7, 221 pieces out of 594; cf. Plate 59.

<sup>5</sup> *Ibid.*, shape 8, 25 pieces out of 594, Plate 57a, b, c. Compare stirrup-mouths, shapes 9-15: 251 of 594.

<sup>6</sup> When it does occur, the spout tapers, and the handle is flat.

of handles except tubular ones related to the stirrup. The earliest known southern coast ware (Nazca) lacks these forms, substituting the double-spout and derivative head-and-spout. Its handles are confined to flat bridges on these shapes. Early central coast pottery was without any such distinctive shapes, but was invaded by the southern ones, which underwent modification and became associated with highland (Tiahuanacoid) traits. These modified forms were accepted in the north in Late Chimu times, alongside the old native northern shapes, plus hybrids like the figure-and-spout, and with a general prevalence of flat handles.

The foregoing analysis serves three purposes. First, it shows the relation of the two Chimu styles to be one of purity for the earlier, and mixedness for the later, at least with reference to the coast of Peru. Proto-Chimu may prove to have absorbed influences of Andean styles or from north of Peru; it is devoid of any direct influences emanating from Nazca or elsewhere in the coast regions to the south. Late Chimu, however, almost certainly contains a Nazca and a Coast Tiahuanacoid strain besides its Inca elements. Since these Nazcoid-Tiahuanacoid elements (double-spout, head-and-spout) appear in Pre-Inca associations on the central coast, they were probably accepted from that area by the Chimu before specific Inca elements (aryballus) reached the northern coast. After the absorption of the Inca strain, the final composite Late Chimu style flooded back southward for almost the length of Peru, and seems also to have flowed northward to the limits of the country.

Secondly, our analysis defines the Proto and Late Chimu styles, so that other styles found in the area may be placed in relation to them, typologically and therefore, hypothetically at least, chronologically, in the discussions of these styles that follow.

The third point is theoretical. WISSLER<sup>1</sup> has recently discussed the distribution of several of the above shapes the world over. He finds the double jar (twin vase), double-spout (twin spouts), and stirrup-mouth (ring neck) occurring in Peru and Ecuador, southern Mexico, the Pueblo area, the Mississippi Valley, Africa, and nowhere else. In each case the distribution is such as to suggest a development of the three shapes in the order named. A bottle-neck jar or bottle vase is also found in these five areas, as well as in several others; from which Wissler concludes that it preceded the three other shapes, the partial or complete sequence of the four forms in the several separate areas representing as many parallel, independent inventions springing from a common basis or "plateau" of pottery, possibly under the stimulus of gourd forms.

If the relative ages of Peruvian cultures were known with certainty, Wissler's reconstruction could be put to the final archaeological test. However, as both Uhle and Tello make Proto-Nazca (Pre-Nazca) earlier than Proto-Chimu, we may assume this relation. It follows then:—

(1) The stirrup-mouth (Wissler's stage 4) is absolutely later than the double-spout (stage 3), but originated in an area in which at the time the double-spout was not known, or at least not in use. Conversely, the double-spout (3)

<sup>1</sup> *The Relations of Nature to Man in Aboriginal America*, 1926, pp. 67-76.



became decadent in the area of its invention without the stirrup-mouth (4) being invented there, or even introduced except sporadically.

(2) The double jar (2) is found concurrently with the stirrup-mouth (4) in the district of the latter's invention. As our backward perspective cuts off suddenly with Proto-Chimu, we cannot be certain as to the original time relation of the two forms. But as the stirrup-mouth is much more abundant than the double jar when the Proto-Chimu record opens, the indication is against its having been developed later. In the south, the double-jar (2) was lacking when the Nazca double-spout (3) originated, and was only introduced and sporadically used much later.

(3) The bottle-neck jar (1) was absent in the south when the double-spout (3) came into use there. It was present in the north when the double jar (2) and stirrup-mouth (4) are first encountered there only if the long-spouted quadrant-handled Proto-Chimu jar<sup>1</sup> be reckoned as a "bottle vase."

While in a loose sort of way the Peruvian data parallel those from other parts of the world rather astonishingly, and the recognition of this by Wissler is surely significant, it seems from the foregoing that his schematic reconstruction of a sequence of forms does not hold in detail for Peru. Of course, our data are far from complete, and it may be that knowledge of the antecedents of the so-called Proto-Chimu and Proto-Nazca styles would revindicate the hypothetical scheme.<sup>2</sup> If these cultures had been imported more or less bodily into Peru, Wissler's conjectured sequence might be better confirmed, though at the loss of his inference of independent development in South America.<sup>3</sup>

## PROTO-CHIMU Plates I, II

The touchstone for the Proto-Chimu style is the collection excavated at the Huaca de la Luna at Moche by Uhle for the University of California, since this is the only described series with grave proveniences and other data.<sup>4</sup>

The only specimens to be added here from the Field Museum collections are the splendid stirrup-mouth portrait head shown in Plate I, which is from the Zavaleta collection from Chimbote; the portrait-head jar in Plate II, Fig. 6, also from Chimbote and the Zavaleta collection; and the five stirrup-mouths (Plate II, Figs. 1-5) which are part of the Jacobs collection secured by myself for the Museum and which are attributed to Viru, the valley next south to that of Trujillo. Three of these five vessels (Plate II, Figs. 1-3) approach what I consider Middle Chimu manner. The one in Plate II, Fig. 1, is unpainted reddish buff; 2 is red, white, and black (brown); 5 is red and white. Those in Plate II, Figs. 3-4, are indubitably Proto-Chimu, and so are five other pieces of Jacobs from Viru, not here illustrated. An eleventh vessel attributed to Viru is, however, clear

<sup>1</sup> Shape 8 of KROEBER, Moche, p. 201.

<sup>2</sup> Tello derives both Nazca and Proto-Chimu from an Archaic Andean culture; but this culture is not known to contain any of the four shapes discussed by Wissler. The nearest resemblance is a sort of rude, bridgeless head-and-spout (Introducción, Plate IV).

<sup>3</sup> Uhle has for some time argued for a Mayoid origin of Peruvian cultures, and lately has been inclined to connect the ancient Mississippi valley culture with both.

<sup>4</sup> KROEBER, Moche, 199-204, 216-221, Plates 53-59, 67a-e.

Late Chimu: a small, poorly made cat figure with a monkey modeled on the handle.

A comparison of Proto and Late Chimu vessel-shapes shows about an equal number of forms confined to Proto-Chimu, confined to Late Chimu, and common to both. The Proto-Chimu occurrences and frequencies in the appended tabulation are condensed from those previously published on the Uhle collection. Since this series consists of nearly six hundred vessels and comprises all the objects found in a number of pure Proto-Chimu tombs, the frequencies can be assumed as fairly representative. As there is no corresponding, unselected series of Late Chimu ware available, only occurrence and absence can be indicated for this style, although the relative frequency of the more ornamental forms can be approximately estimated, as discussed below in the description of the Late Chimu pottery secured.

Proto-Chimu and Late Chimu Shape Frequencies<sup>1</sup>

Shape	Description	Pr-Ch	Late Ch
9-15	Stirrup-mouth . . . . .	42	xx
8	Long-spouted jar, tubular quadrant handle . . .	4	—
(14)	Double jar . . . . .	(0.3)	x
	Double-spout . . . . .	—	x
	Head-and-spout . . . . .	—	x
	Figure-and-spout . . . . .	—	x
5	Constricted-mouth dipper with tubular handle . .	2	—
3	Concavely flaring bowl, flat-bottomed . . . . .	9	—
2	Globular bowl with lid . . . . .	1	—
2	Globular bowl without lid . . . . .	(?)	x
1	Pot with lip, no handles . . . . .	4	x
	Pot with lip, handles . . . . .	—	x
6, 7	Jar, abrupt flaring mouth, no handles . . . . .	38	x
	Jar, one flat handle . . . . .	—	x
	Jar, long tapering spout . . . . .	—	x
	Aryballus . . . . .	—	x
	Goblet, quero-shaped . . . . .	—	x
4, 16	Other forms . . . . .	(0.5)	x
		100	

The outstanding fact derivable from this summary is that there is no Nazca, Nazcoid, Tiahuanacoid, or Inca influence in Proto-Chimu, a conclusion confirmed by examination of design.<sup>2</sup> Proto-Chimu may be later than the first developed style of Nazca or even of Tiahuanaco, but was independent of them, whereas Late Chimu has incorporated elements from both.

On the other hand, Proto-Chimu shows certain affinities with ancient styles of the northern Sierra, and these affinities appear to have died out by Late-Chimu time. Thus the constricted-mouth dipper or drinking vessel with cylindrical handle (shape 5) appears in the North Andean Archaic of TELLO.<sup>3</sup> The concavely

<sup>1</sup> The Proto-Chimu shape numbers are designated as in KROEBER, *Moche*, p. 201. Under Late Chimu, a cross denotes occurrence; a dash, absence.

<sup>2</sup> Proto-Chimu shares certain design motives, such as the step-fret, with other Peruvian styles, but as these motives are virtually pan-Peruvian, they cannot, in our present knowledge, be used to establish stylistic derivations or influences.

<sup>3</sup> Introducción, Plate IIIa.



flaring bowl (shape 3) somehow impresses as having relations in the same direction. Figure-modeled jars in the old North Andean<sup>1</sup> may be related to Proto-Chimu jars and stirrup-mouth bodies. A North Andean quasi-double jar<sup>2</sup> is possibly to be connected with the double jar occasionally appearing in Proto-Chimu as well as with the later head-and-spout form.

This is not an imposing array of resemblances, but it does yield some indication of partial sources for the Proto-Chimu style, which otherwise seems to spring into existence out of nothing.

The Chavin, Cursive, and Recuoid style pieces from the Chimu coast land, discussed below, also have definite affiliations to the northern interior. As to the place of these styles in the sequential development of culture along the coast, it will be seen that the Cursive and Recuoid styles contain shapes like the figure-and-spout which do appear in Late, but not in Proto-Chimu; so that these two styles are indicated as post-Proto-Chimu. The Chavin style, on the other hand, is known from stirrup-mouths and not in shapes with a bridge; so that its temporal as well as typological relations are likely to be closer with Proto-Chimu.

### MIDDLE CHIMU

There is nothing in the collections obtained or previously in Field Museum that throws new light on the hypothetical Middle Chimu, and this style must continue to be accepted only provisionally. The brownish double jar from Chanchan shown in Plate VI, Fig. 8, approaches what I conceive to be Middle Chimu modeling; and so perhaps do the three stirrup-mouths from Viru already mentioned (Plate II, Figs. 1-3).

### LATE CHIMU BLACKWARE Plates VII-X

Late Chimu pottery is prevailingly black, but not exclusively so; just as Proto-Chimu is overwhelmingly red and white, but includes a small proportion of smoked blackware. On the basis of the Uhle and other collections, the frequency of black vessels in Proto-Chimu is about 3 per cent, in Late Chimu about 80. If all vessels made were considered instead of those deposited in graves, the Late Chimu frequency would probably be somewhat reduced from 80 per cent, since purely utilitarian pieces tend to run to untreated red, as already mentioned. The indicated history of Peruvian blackware from its Proto-Chimu or highland beginnings has been reviewed elsewhere.<sup>3</sup>

Late Chimu blackware constitutes the great bulk of the pottery recovered from the Chanchan cemeteries. Dr. Uhle was unquestionably right in so pronouncing,<sup>4</sup> and my hesitating qualification,<sup>5</sup> based on the collections of the American Museum of Natural History, is groundless. It is true that there is a

<sup>1</sup> *Ibid.*, Plate Va.

<sup>2</sup> *Ibid.*, Plate IVa.

<sup>3</sup> KROEBER, Supe, pp. 251-253.

<sup>4</sup> UHLE, Ruinen.

<sup>5</sup> KROEBER, Moche, p. 193, note 5.

considerable proportion of Proto-Chimu ware in the Bandelier collection from Chanchan in that Museum. Possibly Bandelier discovered a Proto-Chimu site at Chanchan which has not been recognized by others. It is more likely, however, that his principal work in the valley having been done at Chanchan, everything that he acquired from the Trujillo region came to be catalogued simply as from Chanchan. In any event, the history of his collections will have to be known in more detail before they can be used as evidence in problems of type and period.

It has already been mentioned that inspection of the cemeteries reveals types, like the steep-walled plate-bowls (Fig. 1), that do not often enter into collections. The Late Chimu collection excavated by Uhle at Moche site B,<sup>1</sup> although smaller and less fine in quality than his Proto-Chimu collection, has value in determining the occurrence in Late Chimu of utilitarian forms that are not often collected.

As to the more decorative pieces, a collection seen at Mansiche may help. This place lies on the way from Chanchan to Trujillo, so that the owner of the collection, having first access to the huaqueros on their way to town, presumably derived all his specimens from Chanchan. All but two or three of a hundred



Fig. 1.

Late Chimu Blackware Plate Bowl from Chanchan.

vessels were black; one was red-white-black Recuoid. Of the 100 black vessels, 50 were stirrup-mouths; 6, double spouts; 12, bridged double jars and figure or head-and-spouts; the remainder were mostly handled and unhandled jars.

The collection secured for the Museum from Sr. Jacobs is also pre-selected in that it contains no utilitarian or plain pieces; but, with this reservation in mind, it is worth analyzing. Besides 5 black figurines, it contains, after deduction of specimens remaining in Peru, 115 blackware vessels specifically attributed to Chanchan and all obviously of Late Chimu type. These classify into primary types as follows (Fig. 2):—

Stirrup-mouth . . . . .	64
Double-spout . . . . .	4
Head-and-spout. . . . .	6
Figure-and-spout . . . . .	7
Double jars with bridge . . . . .	12
Jars with one flat handle . . . . .	8
Jars without handle . . . . .	12
Special types FV, RFJ. . . . .	2
Aryballus . . . . .	0

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 115

<sup>1</sup> *Ibid.*, 204-205, 207, Plate 60, 61, 62e, f.



In percentages, stirrup-mouths, 56; bridged forms, 25; jars, 17; special shapes, 2. These frequencies are fairly similar to those of the Mansiche collection. The Uhle blackware collection from Moche site B included only 3 stirrup-mouths, 1 double-spout, 2 double jars, and 2 aryballuses in a total of 59 pieces. This proportion suggests that the Jacobs and Mansiche collections each represent a cull from a total of 500 to 1000 blackware vessels actually encountered by the huaqueros; cookpots, plates, plain jars, and broken specimens having been rejected.

The 64 black stirrup-mouth vessels comprise 9 having a human figure as body, 17 animals, 11 fruits, 13 simple spheroid or lenticular bodies, 14 similar bodies with relief ornament.

In 55 the stirrup is symmetrical; in 9 it springs from the back instead of the top of the body of the vessel, so that the mouth divides the stirrup into two seg-

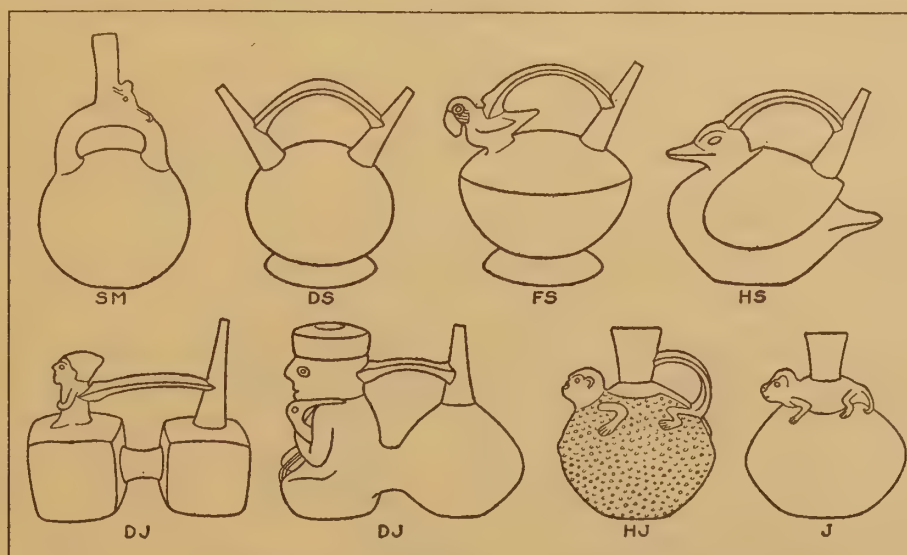


Fig. 2.

Shapes Occuring in Late Chimu and Other Styles. SM, Stirrup-mouth; DS, Double-spout; FS, Figure and Spout; HS, Head and Spout; DJ, Double Jar; HJ, Handled Jar; J, Jar without Handle.

ments of unequal length. The latter is also a Proto-Chimu device.<sup>1</sup> Of the 9, 7 are human figures, 1 a pair of monkeys, 1 an animal, perhaps a dog.

Unless the body is circular, the plane of the stirrup is usually longitudinal, or in case of human or animal figures, in line with the fore-and-aft axis. There are definite exceptions: 1 pair of birds, 3 eels, 1 fruit, 2 (out of 4) gourds with stem, 1 (of 2) prone men. The 3 eels are somewhat difficult to assign because their body curves; the stirrup is in line with the middle of the body, but transverse to the head. The transverse stirrup is not found or is quite rare in Proto-Chimu: it does not occur in the Uhle collection from Moche sites E and F. The fact that both gourds and prone men in the Jacobs collection have the stirrup longitudinal as well as transverse, indicates stylistic instability, a more or less conscious experimenting, such as is characteristic of Late Chimu. Proto-Chimu developed

<sup>1</sup> Shape 13 vs. 9-12: KROEBER, *Moche*, p. 202.

new subjects and original motives, and adhered to them. Late Chimú was more given to reshuffling and recombining of old elements.

Two of the 64 stirrup-mouth vessels have lost their stirrups. Of the 62 remaining, 47 have one small climbing or rampant monkey, where the mouth rises from the stirrup; 1 has the monkey half-way up the stirrup, and 2 at the base. In 4 others there is a small figure at the foot of the mouth: twice indistinguishable, once a bird, once a step. Eight stirrups are plain, like Proto-Chimú ones. The frequency of ornamented and plain stirrups seems to be about the same in the several shapes of bodies.

Other non-Proto-Chimú traits occurring in Late Chimú are flaring mouths, flattened sides of stirrup, and relief on the stirrup. A flaring mouth appears on 4 of the 62. A flaring mouth is also usual on the handleless jars in the collection. It is also an Inca characteristic, and occurs in much late ware to as far south as Nazca.

A greater or less flattening or squaring of the stirrup occurs on about half the Late Chimú jars. Its frequency, compared with cylindrical stirrup, is; men, 0-8; animals, 5-11; fruits, 7-4; plain, 7-6; relief, 10-4; total, 29-33. The lower frequency of squaring on men and animal forms is expectable, because the emphasis of the modeling in these is on the body.

Relief on the side of the squared stirrup appears in 3 fruits, 4 plain vessels, 2 relief-ornamented.

The joint of mouth with stirrup is wedge-shaped (the mouth penetrating the cylinder in appearance) 28 times, horizontally transverse 34 times.

The 17 animal stirrup-mouths classify as follows: felines (?), 4; dogs (?), 2; pair of monkeys, 1; pair of birds, 1; water birds, 2; frog, 1; eels, 3; shark, 1; balloon fish, 1; shrimp, 1. The last four seem characteristic of Late as opposed to Proto-Chimú.

Of the double-spout vessels, 3 are plain, 1 has relief. All 4 have a foot, tapering and spreading spouts of considerable length, and a humped bridge. In 3 cases the bridge is flat, in 1 cylindrical.

Other "bridged" vessels represent either men or animals, as follows: double jars, 7-5; figure-and-spout, 3-4; head-and-spout, 0-6.

The double jars classify as follows: both bodies flattened, 4; both globular, 6; both cubical, 1; one cubical, one flattened, 1. In 8 the front body is modeled into a man or animal: in 4 it bears a human or animal figure.

All bridged specimens have a tapering spout except 3 double jars. In all the bridge is flat, unornamented, and humped; but the degree of arching is quite variable. In types DS, FS, and usually HS, the spout "spreads" or tilts; in the double jars it mostly stands nearly vertical. Relief ornament occurs on the 1 cubical-flattened and the 4 flattened bodies of double jars; and on 2 figure-and-spouts.

The stirrup-mouth and bridged vessels include 19 of a human figure, to which can be added 3 on jars. As regards body posture and ornament, these show the following frequencies:—



	Stirrup SM	Bridge DJ, FS, J
<i>Legs</i>		
Crossed . . . . .	5	3
Knees up . . . . .	2	1
Not clear . . . . .	—	4
Standing or lying . . . . .	2	3
<i>Hands</i>		
On stomach or breast . . . . .	2	2
On thigh or lap . . . . .	3	2
To mouth . . . . .	2	—
Holding an object . . . . .	1	4
Not classifiable . . . . .	2	3
<i>Head-dress</i>		
Conical or flat round-topped . . . . .	6	1
Semi-lunar . . . . .	1	2
Two-horned . . . . .	—	4
Low cylinder . . . . .	2	4
<i>Ears</i>		
Plugs . . . . .	2	3
Unornamented . . . . .	4	2
Veiled . . . . .	3	3
Not clear . . . . .	—	3

These frequencies are closer to the Proto-Chimu frequencies for posture and ornament than were the Late Chimu indications previously available.<sup>1</sup> They suggest that many quite specific Chimu customs did not greatly change during the periods known.

The dozen unhandled jars all have flaring mouths, and are all modeled. They include: 5 carnivores, 2 men, 1 recumbent Pan's pipe player, 1 balsa with two men, 1 row of seals, 1 pelican, 1 fish—suggestive of the usual Chimu range of subjects. Two of the jars also bear relief decoration.

The jars with a flat or ribbon handle are less extensively modeled, and about half the time have the mouth or spout cylindrical or even slightly tapering instead of flaring.

"Goose-flesh" relief stippling occurs on: stirrup-mouths, 6; double-spout, 1; bridge-and-spout, 7; handleless jars, 2; handled jars, 4; total 20. The frequency would perhaps be higher on plain ware and cook pots.

There is one example each in the Jacobs Chanchan blackware collection of two special types that appear to have a fairly wide occurrence in Peru, but whose origin and relations are not known.

The "face vase," FV (Plate IX, Fig. 5) is represented in several museums and published works.<sup>2</sup> The features, modeling, and flaring opening suggest a late period. The retracted lips and the "plaiting" of the hair seem uncharacteristic of any known coast style, and suggest a highland origin for the type.

<sup>1</sup> KROEBER, Moche, pp. 219-220.

<sup>2</sup> LEHMANN, Plate 88 (Cajamarca); FUHRMANN, Plate 47; PUTNAM, Plate 19, Figs. 26 (Ferreñafe), 27; SELER, Plates 28, 29, Figs. 3-6; KROEBER, Moche, Plate 68e (Chepen).

The "rotund figure jar," RFJ (Plate IX, Fig. 4) is another specific shape which is well recognized.<sup>1</sup> It occurs always in polished black, with globular belly, a spout which begins as a human face and ends in a taper, and with a pair of serrated projections rising from the top of the belly so as to flank the face. In the present specimen,<sup>2</sup> the projections are prone human figures stretching their hands toward the central face. In other instances cats replace the human figures; the effect almost always suggests upraised hands; but I have not found a specimen in which hands are actually represented. The spout with its face and especially the cut of the ears in this type are similar to the Tiahuanacoid vessels found by Uhle at Moche site A.<sup>3</sup> The known distribution of the type is on the coast from Lambayeque to Ancon. Until further data accumulate, I should be inclined to construe the type as one of pre-Late Chimu origin persisting to a Late period.

#### LATE CHIMU COLORED WARE Plate VI

A few Chanchan pieces in the Jacobs collection serve to show the substantial identity of Late Chimu colored ware and blackware.

Plate VI, Fig. 5. Jar in shape of seated woman with conical cap. Red of Proto-Chimu quality; with red painted pattern of continuous scroll and striped triangles (Plate XIII, Fig. 5).

Plate VI, Fig. 6. Red stirrup-mouth, with a little purplish black painting. Upward: a foot, globular belly, bird, man prone on the bird, plain stirrup. The general design is similar to that of a black piece in the collection.

Plate VI, Fig. 7. Whistling figure-and-spout jar on footed, lenticular body; seated man. Reddish pink, with thin black scroll, stripe and dot pattern somewhat Cursive in manner. This design is shown in Plate XIII, Fig. 6.

Plate VI, Fig. 8. Double whistling jar: front, bird; rear, spondylus shell and spout; bridge flat. Buff red, with stripes and rows of bars in thin black. The modeling of the bird suggests that of the condor in Baessler's Plate 54, Fig. 228, which has been cited as perhaps representative of a Middle Chimu style, but is stiffer.<sup>4</sup>

No. 169951. Gray stirrup-mouth of monkey seated on a cubical body. The stirrup bears the typical Late Chimu small monkey at the joint. There is a little black painting in pale and poorly drawn lines.

#### LATE CHIMU FROM BEACH MOUNDS Plates VI, XIII

Seven vessels in his collection were stated by Sr. Jacobs to have been taken from the small, sandy burial mounds lying between the beach and the main

<sup>1</sup> UHLE, Pachacamac, Plate 8, Fig. 10 (Lambayeque); KROEBER, Moche, Plates 67h (Pacasmayo), 68d (Chepen); SELER, Plates 28, Fig. 10 (Trujillo), 31, Fig. 4 (Gran Chimu, Chanchan), 11, Fig. 1 (Ancon), 31, Fig. 3 (Cuzco?), 28, Fig. 11, 29, Fig. 12; PUTNAM, Plate 24, Figs. 1-5; HRDLICKA, Plate IV, Fig. 1 (Chicama).

<sup>2</sup> The finder or a subsequent owner, as Sr. Jacobs pointed out, has mended the specimen and added a second head, of Late Chimu type, at the rear of the body of the jar, to make it more interesting. Such frauds of genuine parts can occasionally be met with.

<sup>3</sup> KROEBER, Moche, Plates 64a, 65b.

<sup>4</sup> KROEBER, Moche, p. 223.



cemeteries of Chanchan. The majority are Late Chimu; one or two may be Proto-Chimu; none shows serious influencing by other styles. It thus seems that these beach burials belong culturally with those of Chanchan generally.

The following are certainly Late:—

Plate VI, Fig. 2. Blackware jar in figure of an erect man, the top of his head open; he holds a spondylus shell before his breast. The face is bordered by a braid or seam of a head-cloth. The mouth grins and reveals the teeth; at each corner are two well-marked curved creases.

Plate VI, Fig. 3. Blackware figure-and-spout with brick-shaped body. The seated figure wears a large, vertical, nearly quadrangular head-dress; holds a box-like object; and stretches its legs. The flat sides of the body of the vessel bear pressed relief, shown in Plate XIII, Fig. 4.

Plate XIII, Fig. 2. Unpainted gourd-jar with curved, closed neck and stem, vertical spout, and flat, arching handle. Light brown ware, highly polished and well modeled.

Plate XIII, Fig. 3. Unpainted double-spout; body heart-shaped; a small panel on each of two sides carries a cat figure in relief. The spouts and bridge are of Late type. The ware is light buff.

No. 169914. Three-color stirrup-mouth, in shape of a seated dog, conventionally modeled. The spout flares at the mouth and bears no monkey. The colors are whitish gray, purplish red, and a little pale black.

The following may be earlier:—

Plate VI, Fig. 1. Blackware, stirrup-mouth, seated man. The finish is hard and suggests an example of the occasional Proto-Chimu blackware.

Plate VI, Fig. 4. Stirrup-mouth, seated man, or dressed monkey. One knee is folded under, one up with the hands clasped on it. Reddish brown, with a few stripes of darker brown.

### TIAHUANACOID STYLES

Tiahuanaco-influenced ware has been reported in the Trujillo region only from the two platforms at the foot of the top pyramid of the Huaca del Sol at Moche, as discussed above. The pottery found by Uhle on the southern of these platforms (site A) has been described by him,<sup>1</sup> and reanalyzed and refigured by myself.<sup>2</sup> The surface sherds which I found on the northern platform include several red fragments like those in Plate 65 h, i of my Moche monograph.

Like Uhle, I found some pure Proto-Chimu sherds among the Tiahuanacoid fragments on the platform; but not many.

The nearest affiliations yet known for the Moche Tiahuanacoid ware are in the Middle Period pottery excavated by Uhle at Supe, on the coast between Trujillo and Lima, but considerably nearer the latter and therefore in central Peru. A detailed comparison makes this relation clear. The references are to plates in my previously cited Moche and Supe monographs descriptive of the Uhle collections.

<sup>1</sup> UHLE, Ruinen.

<sup>2</sup> KROEBER, Moche, Plates 63-66.

Goblets in relatively pure Tiahuanaco style: Moche, 63b-d; Supe, 73b, c, e, g, 77 l, m.

Goblets in impure Tiahuanaco or Epigonal style: Moche, 63a, 64 l; Supe 73f, h, i, 77n, o.

Bowls of goblet type: Moche, 63e, Supe, 73d; cf. also design on jar 72d.

Jars with "scenes" impressed with moulds: Moche, 64b-d, 65a, b; Supe, 71c, d, 75c-e, 78b, o.

Man-shaped jars: Moche, 64e, f, 66a-c; Supe, 71b, 72b, c.

Same with scalloped edge: Moche, 64h; Supe, 78j.

Round-headed dolls or figurines: Moche, 64g; Supe, 76a-c.

Painted bowls with foot: Moche, 66h; Supe, 73k-o, 78k; without foot, Supe, 78d, f.

Pressed bowls: Moche, with foot, 65f-i; Supe, without foot, 75g-k, 78e, n.

Pressed pots: Moche, 65j; Supe, 76 l.

Modeled cat heads: Moche, 66d, e; Supe, 77a-g.

Black on white painting, somewhat cursive: Moche, 66d, f, g; Supe, 77g.

That Middle Supe contains certain forms not found in Moche Tiahuanacoid—double-spouts, bird-shaped head-and-spouts, Chimu figure modeling—does not impair the significance of the resemblances, especially in view of the distance separating the two localities. Moreover the Moche recoveries are few and mostly fragmentary. Had we three hundred whole vessels of Moche Tiahuanacoid <sup>as</sup> of Middle Supe, it may be suspected that some of the missing forms would turn up.

As Middle Supe allies closely with Middle Ancon,<sup>1</sup> and this with the "Tiahuanaco and Epigonal" of Pachacamac,<sup>2</sup> the scanty remains of the Moche style under consideration have definite relations for a long distance southward on the coast. Nothing in the same style has been reported from north of Trujillo; and the sparseness of its representation among the thousands of specimens taken out of the ground in the Trujillo area is in itself notable. Evidently this Central Coast Tiahuanacoid style reached the Chimu area only as a temporary intrusion; like the [Red-white-black geometric discussed below.

In line with this conclusion is the fact that so far as can be judged from the scanty remains, the Moche Tiahuanacoid ware is unassociated with any Chimu ware. The accompanying Proto-Chimu evidences are only small scattered sherds; and as for Late Chimu, the Tiahuanacoid pieces include a few that have some resemblance to certain Late Chimu types, especially jars, but all the most characteristic Late Chimu traits are lacking. Similarly, Middle Supe, while it contains an indubitable Chimu strain, has worked this over and eliminated some of the most typical features: modeled figures in Proto-Chimu attitudes, for instance, but with an ordinary jar-mouth instead of stirrup.<sup>3</sup> In fact, Moche Tiahuanacoid, Middle Supe, and Middle Ancon are all without stirrup-mouths, this most char-

<sup>1</sup> STRONG, Univ. Calif. Publ. Am. Arch. and Ethn., Vol. XXI, Plates 44-47.

<sup>2</sup> UHLE, Pachacamac, Plates 4-5.

<sup>3</sup> KROEBER, Supe, Plate 71f.



acteristic shape evidently having penetrated the central coast only at a late Period, when Late Chimu and Inca mixtures spread widely in Peru.

Incidentally, the areally limited influence of Proto-Chimu is revealed by this absence of early stirrup-mouths in the south, and contrasts with the aesthetic energy of the style. The Proto-Chimu culture seems to have been as concentrated geographically as it was intense and creative.

By contrast, Late Chimu is an eclectic combination of elements inherited from Proto-Chimu and taken over from southern and perhaps other sources, even Cuzco style elements coming to be admitted; original features are as good as lacking; but the geographical diffusion is great.

That the Tiahuanacoid style at Moche falls between Proto and Late Chimu in time, as Uhle concluded, there is no reason to doubt, in view of the foregoing. Whether it caused or marked an interruption of Chimu style and culture, or represents an intrusion that coexisted with a continuing Chimu, remains to be ascertained.

### THREE-COLOR GEOMETRIC STYLE Plate XIII

A Three-color or Red-white-black geometric style occurs at Pachacamac Lima, Ancon, and Chancay.<sup>1</sup> It has certain similarities to the Three-color Textile style farther south (Late Chincha and Ica), with which it is probably more or less connected and contemporary. It has not been reported north of Chancay except for three jars excavated by Uhle at Moche site C below Late Chimu graves.<sup>2</sup> These three Moche pieces are painted in somewhat more rounded and hasty lines than typical Three-color pieces from central Peru, and suggest influencing by the cursive style.<sup>3</sup>

Field Museum possesses one jar in this manner attributed to Chimbote (Plate XIII, Fig. 1). This was acquired as part of the World's Columbian Exposition collections by G. A. Dorsey. It has a pronounced foot, a tapering mouth, and a handle. The shape is not like any known vessel-shape in the Three-color geometric manner; but the painted design shows kinship, as does the coloring.

### CURSIVE TRIPOD STYLE Plates V, XI

The only Cursive Tripod style specimens with data are fragments found by Uhle on the Huaca del Sol platform A at Moche in association with Tiahuanacoid material. The painting on these sherds is markedly cursive and without attempt at realism.<sup>4</sup> Sr. Jijón y Caamaño pronounces them related to the Tuncahuan style of Ecuador.

Two tripod bowls in the Peabody Museum from Viru or Chicama<sup>5</sup> have a more Peruvian aspect, especially one with square faces painted in more or less "Epigonal" manner. On the other hand, these faces show a wide, grinning

<sup>1</sup> See the description and review in KROEBER, Chancay.

<sup>2</sup> KROEBER, Moche, Plate 62a-d.

<sup>3</sup> In a recent letter Dr. Uhle suggests an earlier origin for the Moche Three-color style than he has hitherto assumed: perhaps pre-Tiahuanaco; and suspects influences from north of Peru.

<sup>4</sup> KROEBER, Moche, pp. 212-213, Plate 63f-p.

<sup>5</sup> KROEBER, Moche, Plate 69a, b.

mouth with teeth, which is a Tuncahuan feature, and occurs also in pottery taken from underground tombs in the Callejon de Huaylas (upper Santa River) and elsewhere in the northern interior of Peru by Tello and named by him North Andean Archaic. This ware contains a notable admixture of tripod bowls.<sup>1</sup> A. HRDLICKA<sup>2</sup> has also published illustrations of two bowls from Chicama, one tripod and the other pedestalled. The painting on neither is cursive; of both has definite North Andean affiliations; and one has certain "Epigonal" or Tiahuanacoid suggestions.

I saw and secured at Trujillo only one three-legged bowl, which is shown in Plate V, Fig. 5. The provenience is undetermined. The painting on the inside of the bowl (Plate XI, Fig. 4) is not very distinctive, and scarcely Cursive in manner.

Another indication that the Cursive Tripod style represents a highland influence on the Chimú coast is furnished by a sherd from Huamachuco at the University of California (Plate XI, Fig. 6). The painting on this—hasty black on light buff—the form of the motives, their disposition, the texture of the ware, and the suggested shape of the vessel, all agree with the Moche site A Cursive fragments.

The Ecuadorean, Colombian, and Central American distribution of tripod bowls is well-known. Three-legged (or four-legged) vessels have been found in a number of areas in Peru, but are always rare, except perhaps in the northern interior. More data on the Cursive Tripod style therefore promise to illuminate problems wider than purely Peruvian ones. For the Chimú coast area, the association with Tiahuanacoid at Moche site A places the Cursive Tripod style intrusion or influence as probably between Proto and Late Chimú.

#### CURSIVE MODELED STYLE Plates III, IV, XI

Modeled vessels cursively painted are represented by half a dozen vessels in the Jacobs collection (Plates III, IV); several in the Museo de Arqueología Peruana; and a double jar figured by BAESSLER.<sup>3</sup> These vessels are all bridged, whistling jars of shapes DJ, FS, HS. The modeled figures on them tend to be small, modeled with some detail, and are usually placed on double or multiple cubical or cylindrical base vessels. There are no stirrup mouths or double spouts. The ware is of a dull or reddish buff color, rather fine-grained, soft, and fragile; smooth, but except in one case not lustrous. It is painted decoratively rather than with reference to the modeling, in thin, red, and blackish lines which recall the cursive style of the tripod bowls. On the other hand, the modeling carries a suggestion of the style of "Recuay" (Catac) in the smallness, stiffness, and grouping of the figures.<sup>4</sup>

The lot secured is from the Chanchan cemeteries. According to Sr. Jacobs, they are all from the lowest levels, in some cases from the fifth burial reckoning downward. One encounters much loose talk in Peru about stratifications, generally impossible to verify; but Sr. Jacobs is intelligent and usually exact in his

<sup>1</sup> TELLO, Introducción, Plate IIIB.

<sup>2</sup> Smithsonian Misc. Coll., Vol. LVI, No. 16, 1911, Plate 1.

<sup>3</sup> Vol. IV, Plate 156. There is resemblance also to the Red-white-black Recuoid manner discussed below.

<sup>4</sup> Most fully illustrated in SELER, *Altertümer*, Plates 42-47. See also TELLO, Introducción, Plate VB.



statements, and visited the cemeteries often enough to be not wholly dependent on the statements of huaqueros, who mostly lie without hesitation if it will enhance the price of their wares. There is thus possibility that this modeled cursive ware represents a distinctive horizon as well as style.

Of the seven pieces secured (Plates III, IV) all are modeled whistling jars with a flat and somewhat humped bridge, and a single long, tapering spout painted with a few, thin horizontal red stripes. The larger surfaces of the vessels, both flat and curved, are not true planes, but wobble. The modeling goes into some detail, and is neat, but the figures are clumsy. Hands and feet with one exception show five digits made by four incisions. The eye is indicated by a raised oval band, within which is a smaller raised oval. Noses are prominent; mouths wide, but thin; in three cases out of five faces show definite creases between cheeks and mouth, from the nostrils down. Painted designs are chiefly in black, whose application was thin and rapid, the narrow lines flowing. Red is used much less, perhaps because the ware itself is often reddish. The red mostly forms stripes or edges, or comes on faces or other areas accentuating the modeling. The black pattern tends to follow the red stripings. One vessel of the seven lacks black; all the others have both red and black on the buff background. The designs are not very unlike Proto-Chimu painted ones in their motives or even like those pressed in relief on Late Chimu ones, but are more massed. Also, since the bands of design in the area tend to be different, the effect of the cursive painting is more complex. The painting on three of the vessels is shown in Plate XI, Figs. 1-3.<sup>1</sup> The resemblance to Cursive Tripod designs is chiefly in the rapid stroking; in the specific forms painted, Cursive Modeled and Cursive Tripod are not specially alike. Nor is there particular resemblance to the intricate and often "negative" painting which most vessels in the advanced "Recuay" style bear. The effect of the designs as drawn out in Plate XI is somewhat textile-like, and perhaps even more reminiscent of wood carving; but as seen on the pottery itself, the designs carry no suggestion but that of rapid, trained, somewhat hasty brushwork.

The detailed descriptions of the vessels follow:—

Plates III, XI, Figs. 2-2a. Creamy buff; red stripes and faces; brownish black pattern in thin lines. Body brick-shaped; three figures face one end, the spout is near the other end. The figures are of men, their hands joined in front of their bodies; the middle one is the largest and wears a hat in the form of three superimposed and successively smaller disks; the two side figures wear conical caps.

Plate IV, Fig. 1. Colors as in Plate III, except the black is pale, and its lines tend to be either straight or hooked. The body of the vessel represents a boat-shaped rush raft or balsa. This is set on a foot or pedestal. From the balsa rises a small human figure; farther aft, a spout connected with the figure by the usual

<sup>1</sup> Plate XI, Fig. 1 from side of brick-shaped base, 1a from front and 1b from rear of upper side of base, of vessel shown in Plate IV, Fig. 2; Plate XI, Fig. 2 from side of base, 2a from ends and top of base of Plate III; Plate XI, Fig. 3 from end, 3a and 3b from side of cylinder of Plate IV, Fig. 3 (3a and 3b are continuous, the lowest red stripe of 3a being also the top stripe of 3b).

"bridge"; a second human figure clings to the stern. The spout tapers less than in the other specimens of this group, and is of thicker ware. Under the bridge, seven fishes and perhaps birds are indicated in relief—they are the catch of the pair of navigators. Both of these wear conical caps, somewhat convex toward the front. Their eyes and chin areas are painted black; their hands are four-fingered. This specimen is aberrant from the type of the preceding in some details.

Plates IV, Fig. 2; XI, Figs. 1-1b. The buff ground is yellowish; dark red appears in stripes and in masses on the dress of the figure; the black is pale and applied in thin, flowing lines. The body of the vessel consists of two approximate cubes, one bearing the figure, the other the spout. The figure is that of a man seated with his knees up, his hands on his knees under a cape or poncho; at his back are what look like a cushion and the back of a seat or throne. His cap is a low cylinder; he wears large ear-disks.

Plates IV, Fig. 3; XI, Figs. 3-3b. Ground, reddish buff; stripes, dark red; designs, grayish black. Body of vessel, two lying cylinders; a figure stands on one, the spout rises from the other. The figure is that of a standing man, with a cylindrical cap from which a cloth falls over the back of his neck. The right hand is at the shoulder; the left, at the hip. The face is painted red.

Plate IV, Fig. 4. Ground, reddish buff; red, dark, in stripes, or as masses on face or belly of the figure; black, brownish, applied in rather broad cursive strokes. The body of the vessel is complicated, consisting of eight more or less globular chambers. These are disposed in four pairs: each pair has a somewhat conical chamber on top of a nearly spherical one; the lower of each pair is connected with the adjacent ones by a tube. On one of the pairs is the figure, on the opposite one the spout; the bridge between the two therefore diagonally bisects the square formed by the pairs of globular chambers. The figure is that of a man on a seat, his hands on his knees; he wears a conical cap.

Plate IV, Fig. 5. This is the crudest and most divergent piece in the group. The form is that of a dog or other quadruped. The spout rises from the animal's back, but the bridge leads to the head, and not to a superimposed small figure as in the previous specimens. The ground color is pale buff; legs, head, and back are red; pattern is poorly done in thin black lines. Both modeling and painting are inferior, but the ware is fairly good in quality.

Plate IV, Fig. 6. Yellowish buff, painted with dark red lines; the bird's bill is also red. The body of the vessel is a recumbent quadruped, curled on itself: probably a llama, possibly a dog, and apparently haltered. From it arise the usual figure, bridge, and spout, the figure being that of a large-billed bird. All the modeling is only mediocre.

The affiliations of this style will be discussed in connection with those of the following one.

#### RED-WHITE-BLACK RECUOID STYLE Plate V

Of a style which I provisionally call Red-white-black Recuoid, there are four examples in the Jacobs collection, all attributed to Chanchan; another was



presented by Mr. Preston Locke; and others were seen. These vessels bear a resemblance to the Cursive Modeled ones in being whistling double or figure-and-spout jars which carry bridges and small figures. The modeling, while less neat than in the Cursive style, is almost equally elaborate and representative in interest; and the painting is much brighter, the red especially being vivid. The painting also tends to conform to the modeling, or to accentuate it, instead of being a separate decorative device applied to the unmodeled surfaces of the vessel.

The white in the Red-white-black Recuoid style tends to be grayish, but is not a reddish or creamy buff like the background of the Cursive style. The red is a dark or impure vermilion, and if unfired would suggest cinnabar pigment having been used. The black is sooty. The prevalent color is red. The black is mostly painted over the red or outlines it. The spouts are red with a black mouth and usually with a few transverse black lines. The spouts taper; the bridges are flat and slightly arched.

Plate V, Fig. 1 is a figure-and-spout jar (type FS, as above). The front half is a globe on which a man sits cross-legged, his hands down. He wears a truncated conical cap; his ears are veiled. The rear half represents a spondylus shell, from which rises the spout. There is a resemblance to the Cursive Modeled piece illustrated by BAESSLER.<sup>1</sup>

The specimen illustrated in Plate V, Fig. 2, is the best in the lot, the white being purer, and both texture and modeling finer. It is a figure-and-spout jar. The brick-shaped body rests on a foot and bears a step or throne. Before this stands a male figure holding a cap and wearing large ear-plugs. Its head-dress is broken. In outline and proportions this vessel is close to the Cursive Modeled ones.

The vessel in Plate V, Fig. 3 is reminiscent of the Cursive Modeled style balsa (Plate IV, Fig. 1), even to being set on a pedestal and having one figure forward on the boat and the second clinging to the stern. But the present jar is a double-spout, transversely set, and the bridge connecting the spouts is not flat, but like a beam on edge, with its top serrated. Both the human figures are roughly modeled. They wear cylindrical caps and large ear-plugs. The forward one kneels. This is the only vessel of the group that does not whistle.

The object in Plate V, Fig. 4 is a figure-and-spout on a lenticular body set on a foot. The figure is a two-headed owl, or perhaps two owls whose bodies are merged.

No. 169945, whose surface is much decayed, is similar in plan to the last. The figure is that of a man sitting cross-legged, holding a cup, and wearing large ear-plugs and a head-dress with two horns or knobs. The white is replaced in this piece by a dark buff.

The affinities of this style are several. The resemblance to Cursive Modeled has already been mentioned. It is intensified by the fact that no stirrup-mouths have been encountered in either style.

A strong fundamental resemblance to Late Chimú is also obvious. If the present vessels had been executed in blackware, they would pass as Late Chimú.

<sup>1</sup> Vol. IV, Plate 156.

There are no specific Proto-Chimu resemblances. The specimen in Plate V, Fig. 1, for instance, could not be Proto-Chimu even if painted differently. The same is true of the object in Plate V, Fig. 3: the double-spout, its transverse setting, the serrated bridge on edge, are florid Late Chimu.

A third resemblance is to a Recuay style. This is not the classical or "A" style of Recuay as represented by the collection from Catac in Berlin,<sup>1</sup> with elaborate linear, often negative painting, groups of figures, and short horizontal spouts emerging from the figures or fronts of the vessels. The resemblance is to another style, "Recuay B," appearing in several specimens in the American Museum of Natural History, the Peabody Museum, and perhaps elsewhere. The Recuay B style is characterized by representative effects in modeling such as of men leading llamas; is detailed, but clumsy in execution; and uses color in combination with modeling rather than as separate ornament. Its colors are red, white, and black, sometimes with and sometimes without yellow; and the red is vivid. The affinities to the present lot from Trujillo are evident and seem to justify the tentative designation Red-white-black Recuoid for the style represented by this lot.

The classic or A style of Recuay, on the other hand, is closer to the Chanchan Cursive Modeled, both in the shapes of its figures and in the lack of integration, logically at least, of its modeling and painting. Both also depart in the shape of the chambers of their vessels from Late Chimu and Red-white-black Recuoid.

These relations suggest Cursive Modeled as earlier and Red-white-black Recuoid as later; especially as TELLO<sup>2</sup> considers Recuay A as old. Red-white-black Recuoid may thus be considered a Late Chimu variant under highland influences.<sup>3</sup>

### THE CHAVIN STYLE Plate XII

The Chavin style of north Peruvian coast pottery was so named by Dr. Tello on the basis of a small number of distinctive pieces, mostly now in the Museo de Arqueología Peruana, though a few remain in private hands. I have not seen a complete specimen definitively of this type in the United States. The style has scarcely attracted the attention which its importance merits. I therefore republish in Plate XII drawings from some of Tello's photographic illustrations.<sup>4</sup>

The pottery vessels in this style are all attributed to Chicama, the coast valley next north of Trujillo. The style, however, occurs in its most developed and impressive form in stone sculpture found by Dr. Tello in 1919 at and near Chavín de Huántar, high up in the northern interior east of the Sierra Nevada and west of the upper Marañón. Chavin has yielded two styles of sculpture, which although related should be differentiated.

<sup>1</sup> SELER, *Altertümer*, Plates 42-47. The Recuay B style is also affiliated directly or indirectly with the Inca.

<sup>2</sup> *Introducción*, Plate 5B: Archaic, according to the legend.

<sup>3</sup> Whether Recuay was a focus of these influences or only an incidental point in their distribution is another problem. Recuay lies near the head of the Santa river, at a considerable elevation. The Santa is the longest and probably largest river on the coast of Peru. It flows parallel with the coast in the Callejon de Huaylas between the White and the Black Cordillera, then breaks through the latter to reach the sea near Chimbote. Recuay thus lies considerably south of Trujillo.

<sup>4</sup> Plate XII, Fig. 1 of this publication: TELLO, *Intr.*, Plate VIII; TELLO, *Wira-Kocha*, in *Inca*, Vol. I, 1923, p. 268, Fig. 67; XII, Fig. 2: *Intr.*, Plate X; *Inca*, Fig. 61; XII, Fig. 3: *Intr.*, Plate XI; XII, Fig. 4: *Intr.*, Plate XII. See also, *Intr.*, Plate IX, *Inca*, Fig. 76; and *Inca*, Figs. 64, 65, the last two being incised jaguar-head stirrup-mouths.



CHAVIN N.—The first Chavin style is that of the famous relief monolith of Raimondi, long ago brought to Lima, now in the Museo Nacional de Historia, and repeatedly illustrated and copied. Joyce, Uhle, and others have recognized that the style of this carving, although distinctive, bears definite relationship to the (Proto-) Nazca style of pottery painting, especially in its more flamboyant phase,—Tello's Pre-Nazca. On account of this resemblance to Nazca, the present style may be tentatively designated Chavin N.

CHAVIN M.—The second style is the discovery of Tello, and is represented by a number of original stelae and reliefs, or rubbings and facsimile drawings, in the museum of the Universidad Mayor de San Marcos in Lima.<sup>1</sup> This style is notable for its æsthetic value, which probably surpasses anything known from Peru, including even the monuments at Tiahuanaco; and further for the resemblance which its lines bear to those of Maya sculpture. How far this resemblance is specific and therefore historically significant of connection; and how far it is due to the greater liberation and power of the Chavin sculptors compared with other Peruvians, and thus has æsthetic instead of historic meaning, is a problem that will require further analysis. The superficial similarity to Maya art, however, makes the provisional designation of this style as Chavin M conveniently mnemonic.

Dr. Tello has analyzed many of the motives of Chavin M sculpture and shows them to gravitate around the concept of a feline god, probably the jaguar. This concept reappears, with much the same handling of the motives, in the Chavin style pottery vessels from Chicama. These, however, are all stirrup-mouths, and hence of a shape which, so far as the evidence goes, was restricted to the northern coast region until a relatively late time. Furthermore, vessels of this Chicama style have not yet been reported from Chavin or elsewhere in the Sierra area. In fact, Dr. Tello informs me that he found little pottery at Chavin itself, and that rather crude and of archaic appearance.

It is accordingly possible that the pottery ware under consideration represents a variation of the ingrained Chimú coast style under influences from the interior; or that the vessels found at Chicama were actual imports from an interior source of manufacture which has not yet been discovered. In the latter case, the stirrup-mouth shape and technology of the ware would either have been devised on the coast and introduced into the highland Chavin culture, or the stirrup-mouth ware would have originated in the sierra and the Chimú coast pottery art be largely a derivative. Dr. Tello seems to incline to the last view; but I hesitate to derive the stirrup-mouth, which is so abundant in all periods on the coast, from a source in the interior, where stirrup-mouths are scarce or lacking. It is evident that the data are not in hand for a definitive choice between the alternative interpretations. For one thing, the proveniences of the pottery vessels in question are known only by attribution.

<sup>1</sup> Cf. TELLO, Wira-Kocha, in *Inca*, Vol. I, 1923, stela, Plate I (p. 274) and Fig. 72 (also Introducción, Plate VII); "lanzon," *Inca*, Plates III, IV; relief, *Inca*, Fig. 74; relief from Yauya (in somewhat stiffer style), Plate II; relief, *Intr.*, Plate VI.—The Raimondi stone in the "N" style is shown in *Inca*, Fig. 77.

The age of this Chavin style coast pottery, however, can be approximately fixed. Grave associations with Proto-Chimu show it to be early. The key material in this regard as in others is the Uhle collection from Moche, which has exact site and grave proveniences. Uhle's graves 12 and 10 of his site F., at the foot of the Huaca de la Luna, each contained a partial vessel painted and incised with designs in Chavin manner, which are reproduced in Figs. 3 and 4.<sup>1</sup> That both pieces are incised, whereas only four others<sup>2</sup> of the six-hundred in the Uhle collections carry incisions, is probably also significant. As both specimens occurred in graves whose content, like that of the thirty odd other graves

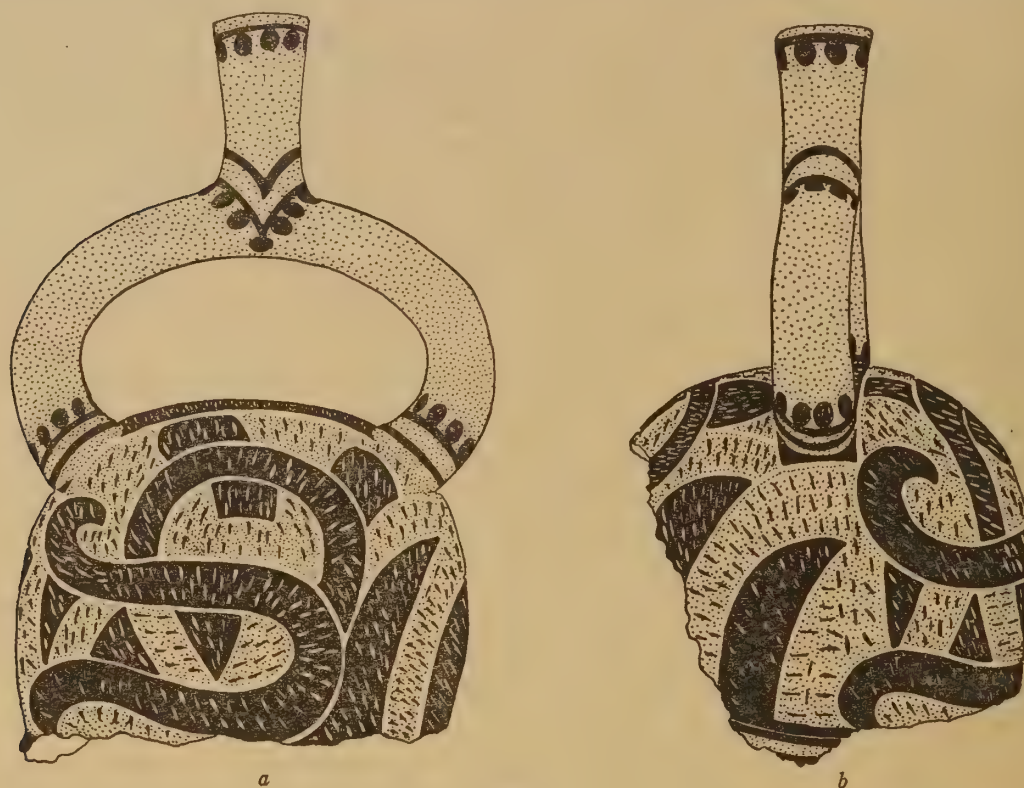


Fig. 3.

Chavin Style Incised and Painted Design on a Stirrup-mouth from Moche. *a* Front View, *b* Side View.

carefully excavated by Uhle in the same cemetery, is pure Proto-Chimu, the contemporaneity of the Proto-Chimu and Chavin styles, or to be more exact, at least their chronological overlapping, is certain.

This time association, considered in addition to the intrinsic similarities of the wares, makes it clear that there existed intimate formative relations or interrelations between the Proto-Chimu and Chavin styles, which should become more evident as soon as a pure Chavin style cemetery is discovered and its data recorded, especially as to grave associations. It is conceivable that certain fea-

<sup>1</sup> Figure 3: KROEBER, Moche, Plate 57j, specimen F12-2980, Fig. 4, *ibid.*, Plate 57l, F10-2896. There is a similar piece shown by Baessler in his Plate IV, Fig. 14 (Part 4). There are Chavin suggestions also in KROEBER, Moche, Plates 55e, 55h, 56h (blackware), 56j (blackware, incised).

<sup>2</sup> One of them the piece in Plate 56j just mentioned.



tures heretofore considered characteristic of Proto-Chimu will then prove to be of alien source, whereas others will remain as of local origin. When it is considered that Proto-Chimu ornament consists of several essentially distinct lines or aspects—realistic figure modeling, depictive painting, depictive relief, scroll and fret painting—its resolution into two or more origins should not appear improbable.

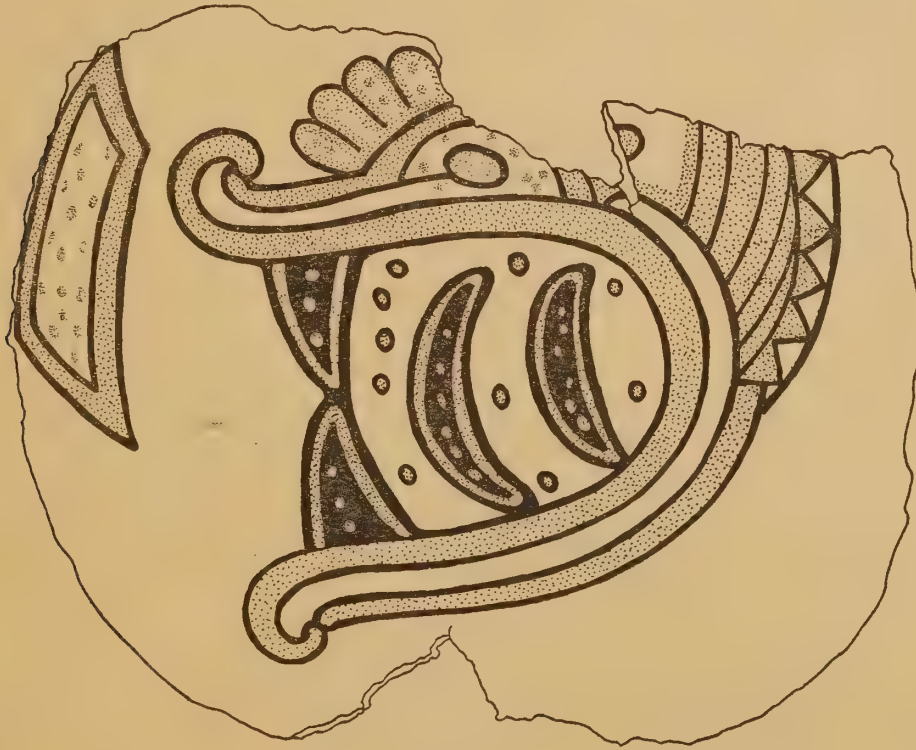


Fig. 4.

Chavin Style Incised and Painted Design on a Fragment from Moche.

## CHRONOLOGY

The factor of time implied by the foregoing styles merits attention. When some eight or nine distinguishable styles or stylistic strains are found in a few smallish valleys, their time relations contain some promise of helping to unravel culture sequences, even though these relations promise to be complex through the injection of spatial factors, namely, the import or influence of foreign styles as discussed in the foregoing pages.

### THE UHLE SCHEME

M. UHLE<sup>1</sup> has definitely established Proto-Chimu as early and (Late) Chimú as late, with Tiahuanacoid falling between, and Three-color Geometric at least earlier than Late Chimú. In fact, he separates Tiahuanacoid into Tiahuanaco and post-Tiahuanaco, besides non-Tiahuanaco which includes Cursive Tripod. I have previously recognized the distinctness of the stylistic strains represented in this subdivision, while doubting their chronological separateness at Trujillo.<sup>2</sup> Three-color Geometric I was inclined to place as later than Tiahuanacoid on account of the evident sequence of corresponding styles on the central Peruvian coast.<sup>3</sup> Uhle, however, in a recent letter expresses the conviction that the Moche Three-color Geometric contains an early element and may be pre-Tiahuanacoid.

### THE HRDLICKA SCHEME

A. HRDLICKA,<sup>4</sup> in an account of explorations made some years ago on the coast of central and northern Peru, comes to the following conclusions as regards Chicama, the valley adjoining that of Trujillo on the north.

(1) The earliest population, which lived "not over some centuries before the arrival of the whites," was of the moderate-statured, brachycephalic race; that is, the prevailing one on the Peruvian coast between Pacasmayo and Pisco, or farther, and which is fundamentally of the same type as a large portion of the inhabitants of Ecuador, Colombia, Central America, and Yucatan. These people did not deform the head beyond some accidental occipital flattening. They lived chiefly near the shore and buried prevailingly in huacas which are nothing but "construction cemeteries" or burial mounds of adobe bricks and earth. They had little metal, and their pottery was simple and sombre.

(2) These people were followed by others of the same fundamental physical type, but of modified habits, shown in part by the pronounced occipital head-flattenings, due to cradle-boards, and especially by "the frequent practice of intentional fronto-occipital skull deformation." Their burials were mostly in

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<sup>1</sup> Ruinen.

<sup>2</sup> Moche, pp. 213-215.

<sup>3</sup> *Ibid.*, p. 214.

<sup>4</sup> Some Results of Recent Anthropological Exploration in Peru. Smithsonian Miscell. Coll., Vol. LVI, No. 16, 1911, pp. 1-16.



larger cemeteries and generally more inland; they contain more copper and bronze and more varied pottery.

(3) Finally, "at about the time of the greatest prevalence of the deformed crania" of the preceding type, "there appear individual elements of the dolichocephalic type "... individuals, or little groups of burials," which "are not local developments, for intermediary cranial forms, which in that case would be numerous, are lacking." These heads are undeformed or merely accidentally flattened in the occiput. The pottery with these burials contains especially bowls with large, flaring, convex borders.

Hrdlicka's Plates 1, 3, and 4, which are referred to the earliest population, show respectively a three-legged bowl and a pedestal bowl of Cursive Tripod affiliations; two figurines; the head of a black jar of RFJ shape and a modeled cat-head similar to one found by Uhle in Tiahuanacoid association.<sup>1</sup> With the exception perhaps of the figurines, this material is all post-Proto-Chimu.

His Plate 2, referred to the last population, shows two views of a Proto-Chimu flaring bowl of type 3.<sup>2</sup>

There is evidently an association between the physical type and the culture which Hrdlicka ascribes to his population 1, and the same for population 3; only 3 is surely the earlier. Its pottery is Proto-Chimu, and undeformed and relatively long skulls were consistently found by Uhle in his Proto-Chimu graves at Moche site F. To complement, the pottery of Hrdlicka's population 1 is post-Proto-Chimu, and its moderate occipital deformation is normal in the late cemeteries of Chanchan.

As to Hrdlicka's population 2, with pronounced frontal flattening, skulls of this form are characteristic of the Nazca culture and its varieties in southern Peru, but seem not to have been otherwise reported from the northern coast. The determination of the type of culture associated with them would be important.

### INFERENCES AND PROBLEMS

Within the frame of the four general eras of pre-Columbian Peru which I have previously outlined—pre-Tiahuanaco, Tiahuanacoid, pre-Inca, and Inca—the ceramic styles of the Trujillo area may be disposed as follows:—

Proto-Chimu and Chavin are more or less contemporary and pre-Tiahuanaco.

Cursive Tripod and Modeled, Three-color Geometric, Tiahuanacoid, and the problematical Middle Chimu are presumably Tiahuanacoid and also pre-Inca. Their more precise interrelations remain to be ascertained.

Late Chimu probably began its career in the pre-Inca era, and continued through Inca into colonial times. Red-white-black Recuoid is likely to be a contemporary at least of the earlier Late Chimu.

In the pre-Tiahuanaco era the traceable evidences for relations of the Trujillo coast with other areas are only with the northern interior.

In the Tiahuanacoid and pre-Inca eras relations extended much farther. There are indications of southern coast influences, both earlier such as Nazca-

<sup>1</sup> KROEBER, Moche, Plate 66e.

<sup>2</sup> *Ibid.*, p. 201; and *ante*.

derived shapes in Cursive Modeled, and later in Three-color Geometric; of southern highland influences in Tiahuanacoid; of northern interior and Ecuadorean influences in Cursive Tripod and Cursive Modeled and perhaps Three-color Geometric. There is as yet no clear indication of influences from the coast north of Trujillo.

In the later pre-Inca and Inca eras the last-mentioned extraneous influences persisted in varying degree, largely as impulses that had become established in the Trujillo area; the coast to the north around Lambayeque probably contributed tendencies toward blackware, and stylistic floridity and eclecticism; and certain Inca traits began to be adopted. The resultant composite style in turn was carried, or vessels made in it were transported, over the whole length of the coast of Peru and more or less into the interior.

Until this late period, on the other hand, the influence of the Trujillo coast area styles was much less expansive and apparently limited chiefly to the northern interior as far as Chavin and Recuay. Even there, influencing was reciprocal, and the relative activity of coast and interior awaits determination.

The Proto-Chimu and Chavin styles not only are apparently the earliest, but rank aesthetically highest; and the antecedents of both are unknown. With the passage of time more and more influences from and to a distance become discernible. This difference may be intrinsic, due to a widening range of cultural intercourse; or it may be apparent, and due to comparative data for the later periods being much fuller. In this event the early styles might prove to be equally composite in origin if we knew enough about their antecessors and contemporaries.

With all the stylistic borrowing that went on, there is an evident tendency toward internal assimilation of style. Late Chimú, for instance, contains style traits derived from practically every part and period of Peru; but it is no crude commingling of these elements. While it lacks the astounding creative boldness and sureness of imagination that set the earliest styles on so high a level, it evinces a taste and elegance that would be impossible without a definite inner consistency. If the history of the earlier styles were known, a similar ability to utilize and coherently rework elements of alien origin might be manifest.

Neither the areal nor the temporal factor can be disregarded in the archaeology of Peru. Their interrelations make problems complex and demand the most critical approach. But an ignoring of regional considerations must vitiate any chronological reconstruction at innumerable points, as almost the whole of the foregoing discussion shows. And a negativistic attitude toward time sequences comes to little else than a refusal to consider a real and soluble problem on the ground that it is complicated and difficult.

The great need for further knowledge of the prehistory of Peru is from the highland interior. But so little detailed and reliable information is available from the coast that accurate data from there, especially as to associations of material, will almost certainly go far to clear up problems not only of the coast, but of the interior as well.



## ADDITIONAL NOTES

P. 9, note 3. Subsequently, Dr. Tello has employed "Mochica" instead of "Chimu" for the red and white ware, reserving "Chimu" for the combined Tallan-Mochica culture and area.

P. 13. A subsequent view from a more advantageous point in the dry season of 1926 shows a leaning of these walls, as if they might represent a fill against the side of a smaller pyramid to connect this with a larger one into a greater structure; in other words, the Huaca del Sol may after all resemble most other Peruvian constructions in having been a piecemeal accretion.







POTTERY JAR OF PROTO-CHIMU STYLE IN SHAPE OF A PORTRAIT-HEAD.  
FROM CHIMBOTE, PERU (ZAVALETA COLLECTION).







1



2



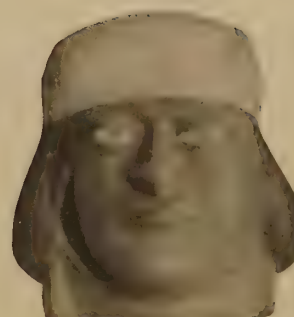
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POTTERY VESSELS OF PROTO-CHIMU STYLE.  
FROM VIRU (Figs. 1-5) AND CHIMBOTE (Fig. 6), PERU.







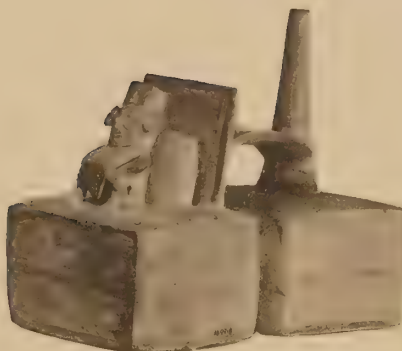
POTTERY WHISTLING JAR OF CURSIVE MODELED STYLE.  
FROM CHANCHAN, PERU.







1



2



3



4



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6

SPOUT-AND-BRIDGE POTTERY JARS OF CURSIVE MODELED STYLE.  
FROM CHANCHAN, PERU.







1



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3



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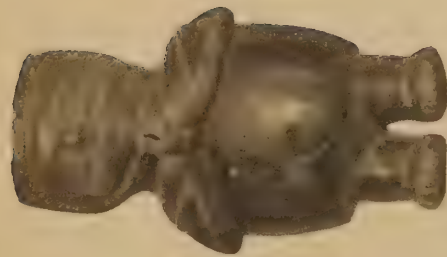
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POTTERY JARS OF RED-WHITE-BLACK RECUOID STYLE (Figs. 1-4) AND SPECIAL TYPES (Figs. 5-6), PERU.





1



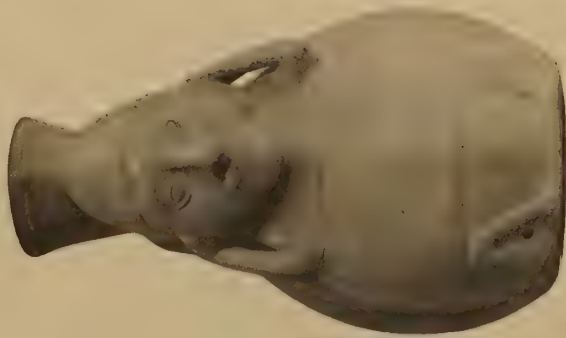
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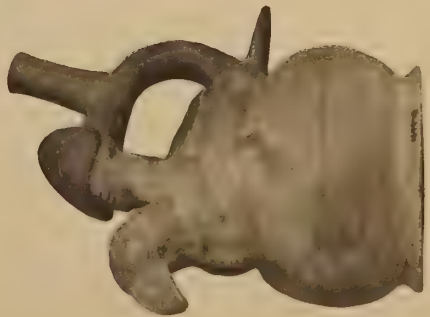
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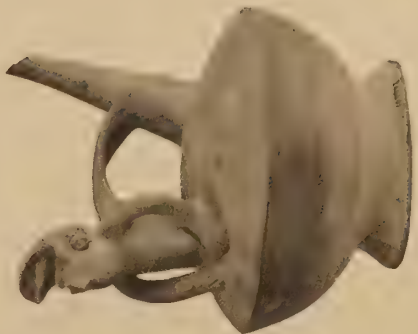
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8

POTTERY VESSELS FROM BEACH MOUNDS (FIGS. 1-4) AND LATE CHIMU COLORED WARE (FIGS. 5-8), FROM CHANCHAN, PERU.







1



2



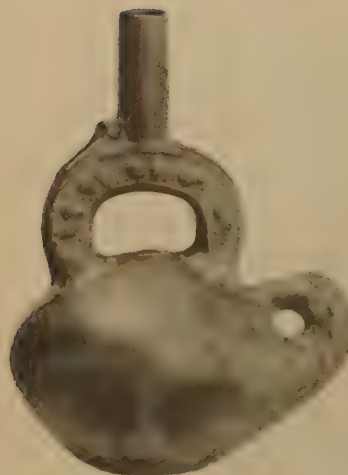
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6

POTTERY VESSELS OF LATE CHIMU STYLE, BLACKWARE.  
FROM CHANCHAN, PERU.







1



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4



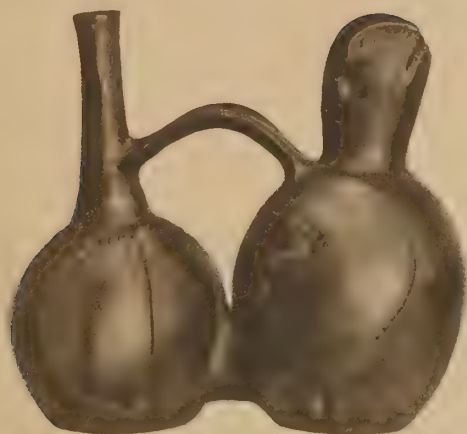
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POTTERY VESSELS OF LATE CHIMU STYLE, BLACKWARE.  
FROM CHANCHAN, PERU.





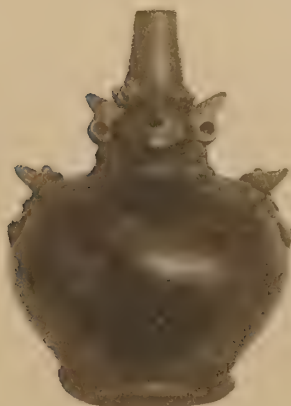
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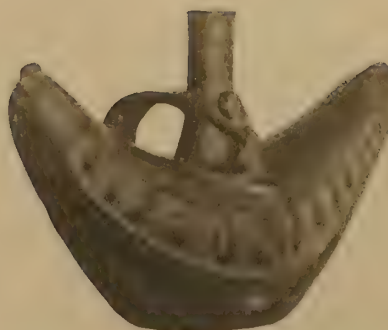
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POTTERY VESSELS OF LATE CHIMU STYLE, BLACKWARE.  
FROM CHANCHAN, PERU.







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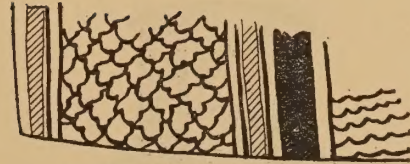
POTTERY VESSELS OF LATE CHIMU STYLE, BLACKWARE AND FIGURINES.  
FROM CHANCHAN, PERU.



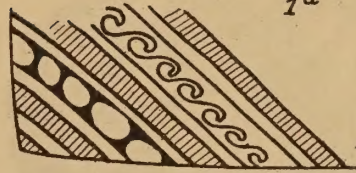




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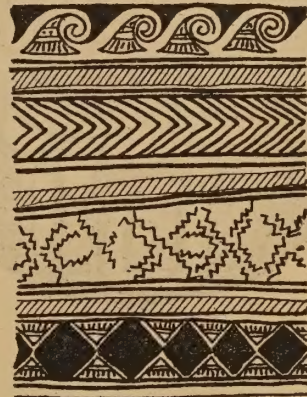
1<sup>a</sup>



1<sup>b</sup>



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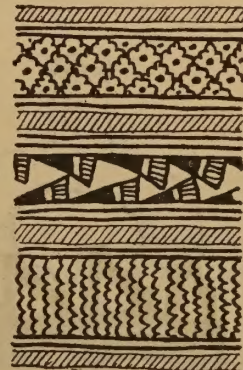
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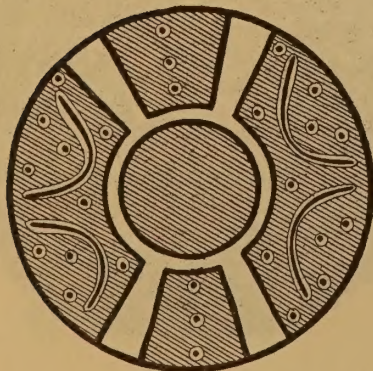
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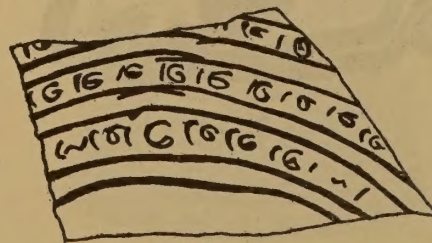
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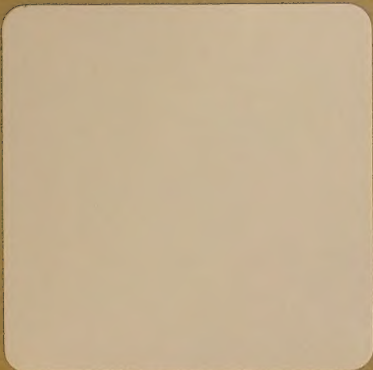
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